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ABSTRACT

A study was conducted to improve accessibility of the handicapped to appropriate vocational education experiences. To accomplish this purpose two handbooks for vocational administrators were designed, developed and disseminated, and a third handbook was planned. (These handbooks cover federal laws affecting vocational education for the handicapped secondary students, implementation of mainstreaming concepts in vocational education, and the administration of vocational adjustment classes or work experience coordination for handicapped students.) In addition, three individual studies were conducted to identify competencies needed by any student entering a regular vocational program in agriculture, auto mechanics, and homemaking education. From these competencies special education teachers identified those skills which handicapped students might be expected to achieve independently or with special education services. Social skills were cited as most important entry competencies. However, with special services, such as a teacher aide, handicapped students were expected to be able to achieve most of the required entry competencies. These results should be considered when designing inservice for vocational special needs personnel and when considering individual educational programs and placement. (Author/BM)

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Final Report

Project No. 498AH70179
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ACCESS STRATEGIES FOR THE HANDICAPPED IN VOCATIONAL EDUCATION

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U.S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE

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ABSTRACT

Access Strategies for the Handicapped in Vocational Education

Theodore T. Foley II and Donald L. Clark

The goal of this study was to improve accessibility of the handicapped to appropriate vocational education experiences. To accomplish this goal two objectives were accomplished:

1. Two vocational administrator's handbooks were designed, developed, and disseminated. One covered federal regulations concerning vocational education for the handicapped. The other addressed implementing "mainstreaming" concepts in vocational education for the handicapped.
2. Three studies of competencies vocational teachers required of students entering agriculture, auto mechanics, and homemaking vocational programs were designed, conducted and disseminated. From these competencies special education teachers identified those which handicapped students might be expected to achieve independently or with special education services.

Information was collected from inservice needs assessment surveys, interviews, literature reviews, and a modified Delphi questionnaire approach. Vocational educators expressed a desire to have more information from state education agencies. Also important were prevocational preparation, student placement, and teaching techniques for handicapped students in regular vocational programs. Social skills were cited as most important entry competencies. However, with special services, such as a teacher aide, handicapped students were expected to be able to achieve most of the required entry competencies. These results should be considered when designing inservice for vocational special needs personnel, and when considering individual educational programs and placement.

ACKNOWLEDGEMENTS

A major share of the credit for any endeavor must go to the individual who generated the dream and developed a plan to place that dream along a path to reality. Marc Hull deserves recognition for his insight and his actions in initiating this project. Marc had this awareness long before the current catch phrases were in vogue for implementing full educational opportunities that are appropriate in meeting the vocational education and occupational training needs of handicapped youth. Marc has contributed a great deal toward the development of a model of comprehensive secondary programming for handicapped students.

Most schools already have many components and the best intentions for meeting the needs, and thus the rights, of all children to an equal opportunity for an appropriate education that will provide them with competative job skills. But Marc has noticed that most secondary programs do not have in-place a continuum of available, appropriate placements for handicapped students. In other words, few school districts have implemented all the necessary vocational education components for a comprehensive secondary program.

Marc Hull's life work has been to identify the missing components and to supply the pieces to fill these gaps with an ultimate goal of providing handicapped individuals with an equal access to all of life's treasures. Access to vocational skills means independence, freedom and self-worth for many handicapped individuals. Marc worked hard to put together the proposal for this project, and then acted enthusiastically as the principal investigator during the crucial first months. The success of this project is largely attributable to Marc Hull, and we who remain with the Vocational Special Needs Programs at Texas A&M University will always be grateful.

Tico Foley inherited the role as principal investigator for this project when Marc Hull left Texas A&M University to join the Special Education Department in the Vermont Education Agency. Tico had the major responsibility for holding the project together amidst

the comings and goings of staff members. Tico did the rough work. He gathered the raw materials through literature reviews, survey instruments and personal interviews. Then he roughed out the major products -- the two handbooks.

Tico's sense of responsibility compelled him to attend to the administrative details of budgetary allocations and completing reports. In the final months of the project, Tico delayed advancing to a new position to see through the completion of the project activities and final report. Now as he moves on to continue his work in vocational special needs at Moorhead State University, we wish him success in both his personal and professional endeavors.

Marilyn Kok contributed the fine details, the careful crafting, the finishing touch. She demonstrated the inestimable worth of a good technical writer and editor. She also demonstrated an unwavering drive for task completion that kept the rest of the project staff members going and ensured our successfully completing the handbooks on schedule. During her years at Texas A&M University Marilyn has contributed to every project within the Vocational Special Needs Programs, but her contribution to this project, especially in writing and editing the handbooks has been fantastic. Fortunately Marilyn will be continuing her contributions here and we will be continuing our development through her.

Other members of the Vocational Special Needs Programs at Texas A&M University provided great assistance to this project whether they volunteered their help while employed on this grant, or involved in other activities. Linda Parrish, the Coordinator for the Vocational Special Needs Programs at Texas A&M University, was also responsible for leading off the entry-level competency studies with her work with the agricultural teachers. Sandra Swinney and Jerry Davidson conducted the homemaking and auto mechanics education protions of the entry-level studies. Nan Crowell, Kenne Turner and Lindy Wright made major contributions to the administrator's handbook. Encourangement and support was also given by Robert Gish who taught us something about the computer.

Project staff gratefully acknowledges the assistance and support of Velma Brawner of the Bureau of Occupational and Adult Education in the U.S. Office of Education. The project staff would have strained for success without the help of the project advisory committee, the graduate doctoral committees, and the expert vocational and special education teachers who contributed from the field. While over two hundred professionals contributed to the administrator's handbook, three individuals associated with the Texas Education Agency made significant contributions throughout the duration of this project, namely: Hayden McDaniel, Eleanor Mikulin, and Leo Schreiner. These individuals have made continuing commitments towards advancing the goal of providing handicapped students access to appropriate vocational education and occupational training.

Every staff member of the Vocational Special Needs Programs at Texas A&M University has laid claim to the poorest penmanship, but in spite of this, our secretaries have survived thousands of pages of drafts and editorial scribble with good cheer. As on most projects, the secretarial staff contributed a great deal to the successful completion of this project and accordingly our appreciation is extended to each member of the staff.

Finally, but most importantly, you, the reader must be recognized. For it is your effort that will take these ideas and bend them to suit the individual needs of the students with whom you work. You will rip and mend, plow and read, calculate and transcribe, tinker and comb, suture and sell. The cost will exact your days and nights, but the product will be the future -- an improved educational program for each handicapped student.

Donald L. Clark
Project Director
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INTRODUCTION

> The State shall use these funds to the maximum extent possible to assist handicapped persons to participate in regular vocational education programs. (45 CFR 104.312)
>
> The term [special education] also includes vocational education if it consists of specially designed instruction, at no cost to the parents, to meet the unique needs of a handicapped child. . . . "Vocational education" means organized educational programs which are directly related to the preparation of individuals for paid or unpaid employment, or for additional preparation for a career requiring other than a baccalaurate or advanced degree. (45 CFR 121a.14)
>
> No qualified handicapped person shall, on the basis of handicap, be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under any program or activity which receives or benefits from Federal financial assistance. (45 CFR 84.4)

In early 1977 when the proposal for this project was written, the laws supporting the regulations cited above had just been passed by Congress and signed by the President. By the time the grant had been awarded and project activities commenced, these final regulations had been issued, thus interpreting and implementing the laws.

Before these laws were passed and regulations developed there was a major question as to how and where handicapped students would be provided an equal opportunity for an education and for employment training that would meet their unique needs. Many options were being considered in an attempt to meet the requirements of the federal mandates that had recently emerged from new legislation and from judicial interpretations of the United States Constitution to meet the needs of the handicapped. Private institutions, rehabilitation agencies, and welfare departments had all been involved, in varying degrees, in serving the occupational training needs of handicapped youth. Public schools had previously maintained standards of admission which excluded many handicapped individuals. Court cases were now evolving that would not only require the public school to

admit all handicapped applicants on the same basis that non-handicapped students were admitted -- proof of age and residence -- but also the public school was beginning to sense that the other agencies and institutions which had been attempting to help provide training for the handicapped would no longer be doing this because their funds were being restricted or redirected. The special education model of creating separate classes which would supposedly be better able to meet the different needs of handicapped students was the general mode of operation. The "Child Find" programs got under way and increasing numbers of handicapped students who had never been enrolled in any school were located and referred to the schools. The whole idea of mainstreaming, that wasn't taken too seriously by many of the practitioners, was an ivory tower pipe dream that hinted of the one room school house concept. Special education students were placed in special education class rooms with other special education students and special education teachers.

Handicapped people had been shut away too long. Advocacy groups did not want to see them restricted in their education or in their employment opportunities. These groups were perceptive enough to see that a restricted education would not offer the handicapped individuals the wide range of employment possibilities that would allow them to lead independent lives. Social isolation and ostracism that the handicapped had experienced when labeled and placed in special education classes was also a concern. The professional preparation of the special education teacher who knew little about small engine repair or food preparation but who was supposed to prepare them for a job was likewise a concern. There was also concern and apprehension when handicapped individuals were placed in vocational education classes with a first-year vocational education teacher who was afraid of their handicap but who took the job because next year the teacher could advance into a regular teaching position. The handicapped, themselves were tired of waiting for years, and then

being placed in an institution hundreds of miles away from home to learn a trade that was menial, outdated or just not interesting to them. They were tired of learning occupational skills but then finding that no jobs were available to them, or that they lacked the social skill that allowed them to successfully interview, maintain and advance in a job.

Special education teachers had been trained to believe that only in a special education class would the handicapped student have a chance to succeed. Junior high and senior high handicapped students who had failed for nine or more years to learn their basic educational academic tools in the regular class were being "saved" in the special education class. The school was successful in holding on to the student until the drop-out age was achieved when the student was carefully guided into the application process for rehabilitation services.

Meanwhile, the vocational teacher was placed in a dilemma. At times the vocational teacher had taken any student who had been sent to him and with concern taught a trade. This same vocational teacher had reeled under the discrimination blasts of the sixties which had accused the vocational programs of being an alternative placement for students who couldn't hold a B average or who weren't going to college. This vocational teacher was now very apprehensive about accepting a student who was accompanied by a large manila folder labeled "CONFIDENTIAL" and containing all kinds of handicapping information describing the failures and disabilities of the student. The vocational teacher knew how to take a student and teach a trade but the vocational teacher didn't know anything about teaching a handicap. Who would decide whether the regular class was the appropriate setting? What about safety? Where was the vocational teacher supposed to get the curriculum modifications? Who was responsible for retraining the vocational teacher so as to develop new skills for working with handicapped students? What about the non-handicapped students in the class? How many handicapped students will be in a regular vocational

class before a teacher's aide is assigned to help? Who is going to do all this extra paper work? Who is going to teach the non-handicapped students while the vocational teacher individualizes instruction for the handicapped students? What if the student has a seizure in class? What if the vocational program prepares this student for a job and then the special education program places the student in another job for which we didn't train the student . . . what happens to the accountability the vocational teacher has for placing students in the jobs for which they were trained?

In response to these concerns, administrators at the state education agencies and the local school districts are developing policies and programs that provide a comprehensive continuum of vocational education instruction and services for handicapped students. Vocational administrators recognize that the most appropriate placement for a handicapped student is not always a placement within the regular vocational program. However, when the members of the placement committee and the individual education program committee determine that the best placement for the handicapped student is, to some extent, within the regular vocational program, then the vocational administrator and the vocational teacher are faced with new dilemmas.

The questions no longer revolve around what strategy might be the best one to use to place the student in the regular vocational classroom setting, if that is the appropriate setting. The new questions are centered around the fact that now, when the handicapped student is appropriately placed in the regular vocational classroom, the vocational teacher and the vocational administrator need to know something that will help them prepare this youngster for the world of work. Vocational teachers and administrators need to learn the language and tools of special education so the vocational teacher may become involved in the placement of the student, so the vocational teacher may help that student find and secure a job in the community, a job which promises independence and advancement. The vocational counselor needs to learn how to provide role models and career options

that will open doors for the handicapped students. The vocational administrator needs to know where to obtain the financial and technical assistance that will be necessary for providing the facilities, equipment, and teacher training that will be necessary to meet the needs of these handicapped students, not just to meet the needs but to allow the students to achieve their maximum potential.

As the project staff members collected information on the changing laws, the changing attitudes, and the changing questions, it became apparent that the objectives of the original study needed to be modified in order to accomplish the initial goals. Those initial goals were to design and test strategies for improving the accessibility of the handicapped to appropriate vocational education experiences. If the handicapped student was already entering vocational experiences, then the goal must be to focus on helping those experiences to be appropriate ones for each handicapped student.

The major accomplishments of this project have been consistent with the original goals and objectives of this project and have yielded the following documents and programs:

1. A handbook describing the federal regulations concerning vocational education for handicapped students in secondary programs.

2. A handbook for vocational administrators, to help them prepare themselves and their vocational teachers and counselors with staff development activities to implement vocational education in the least restrictive environment for the maximum employment training opportunity for every handicapped student.

3. Three dissertations describing entry level competencies that may be necessary for any student entering a regular vocational program and documenting by handicapping condition the ability of special education prevocational programs to prepare the handicapped students for entry into these regular vocational programs.

4. Liaison and cooperation bridges between vocational educators and special educators laying the framework for a handbook for special education vocational-adjustment-coordinators or work-experience coordinators.

5. Several publications in professional journals and presentations at professional and inservice teachers meetings in both special education fields and vocational education fields.

The benefits accrued through this activity, enhanced by its location within a university setting, will continue to unfold through additional publications and spin-off research activities by those who conducted the research and by the colleagues and professionals with whom they interacted. In addition, countless numbers of handicapped students will be receiving a higher quality of vocational instruction from more competent and more confident vocational teachers.

METHODS

The activities conducted under this grant may be divided into five major categories. The first and most important with regard to the successful accomplishment of the objectives of this project was the coordination of this project with other activities at Texas A&M University. Second was the needs assessment conducted for the administrator's handbook and for the vocational adjustment coordinator's handbook. Third was the contracting with experts in vocational education and special education to provide information for the entry level competencies studies and for the administrator's handbook. A fourth activity included a computor literature search and a continuing review of articles and resources pertaining to vocational education for handicapped individuals. A fifth and continuing activity was the production of the handbooks, dissertations, articles, and presentations concerning vocational education for handicapped students in secondary programs in the least restrictive environment.

Coordination with Other Activities at Texas A&M University

The Vocational Special Needs Program at Texas A&M University operates in conjunction with The Center for Career Development and Occupational Preparation. Vocational Special Needs is also a part of the Vocational Program within the Interdisciplinary Education Program of the College of Education. This arrangement provides the Vocational Special Needs Program with the strength of the resources of the College and of the University, while allowing it the flexibility necessary to make its own way in this important area.

During the course of this project the Vocational Special Needs Program at Texas A&M University has successfully conducted a training grant from the Bureau of Occupational and Adult Education (BOAE), training and research grants from the Bureau of Education for the Handicapped (BEH), and training and research grants from the Texas State Department of Occupational and Technical Education. In addition,

the Vocational Special Needs Program has been a major force within the University as well as the state of Texas providing leadership in teacher preparation through infusion of special needs concepts and competencies into the regular vocational teacher preparation, and through inservice teacher development at regional and statewide workshops.

It is particularly important to note that this confluence of effort and ability is only possible at a university setting where the maximum use may be made of the interexchange of ideas and attitudes from basic research, field research, teacher preparation, inservice teacher development, dissemination and material development. It is only at a university where the feedback from each of these activities can enhance the products of each of the other activities.

Take for example the administrator's handbook developed under this project. This handbook is a product, a material developed for use by vocational administrators to help them provide their vocational teachers and vocational programs with the tools necessary to meet the needs of the handicapped students entering their classes. This handbook profited from the basic research in occupational concept learning that has been conducted with students for differing handicapping conditions. The subjects for the basic research were secured from teachers who had been exposed to inservice or preservice teacher preparation activities from the university. The confidence that had been built among those teachers by the university also allowed the staff developing the administrator's handbook to secure responses to questionnaires, interviews in person, on tape, and via telephone. Not only did these teachers provide information when solicited through the activities and the project, but when the other members of the Vocational Special Needs Program conducted courses on campus or off campus, or when they participated in the regional or statewide workshops, they were able to interact with the practitioners in the field. This interaction not only provided information and insight into solutions to some of the concerns and problems which needed to be addressed by

the administrator's handbook, but also provided questions and dilemmas that would be the genesis of further research and inquiry from the Vocational Special Needs Staff at the University. It would be easy to continue at length to extole the advantages that this project has had in being located at a university setting, but suffice it to say that the end result is more "bang for the buck" for each of the activities concerned. The administrator's handbook has become not only a resource tool to answer administrator's questions, but also an access to inservice activities to be provided at the local level and a cue for keeping up to date regarding important information concerning secondary vocational programs for handicapped students.

Needs Assessments for the Handbooks

The initial needs assessment for this project relied upon the exemplary work done by George Fair (1976) for the Texas Education Agency. Additional insights to the needs of handicapped students in secondary vocational programs came from the congressional reports (House Reports No. 93-244, No. 93-500, No. 94-332, No. 94-1085, and No. 94-1701; Senate Reports No. 93-318, No. 93-391, No. 94-168, No. 94-455, and 94-882). As the Federal Regulations were issued the accompanying supplementary information, comments and appendices provided more information concerning the issues and concerns facing both the disabled citizens seeking employment training and the professionals who were attempting to provide appropriate education for all students.

To confirm our review of the needs expressed in the documents mentioned above and to set priorities for addressing these needs in the handbooks, two survey instruments were developed. These surveys were separately designed for vocational educators and for special educators serving the employment training needs of secondary handicapped students.

Vocational administrator's handbook survey. This survey was designed to sample the opinions of vocational educators who were interested and concerned about serving the needs of handicapped

students in their programs (See Appendix A).

Vocational administrators (or school district superintendents for districts not having designated vocational administrators), vocational supervisors, and vocational counselors in the state of Texas were included in the sample. Vocational consultants employed by the Texas Education Agency were also invited to respond to the questionnaire. The sampling method included representation from all the school districts in Texas with more than 5,000 students in average daily attendance. School districts with fewer students were sampled by randomly selecting a district within each size category (less than 500; 500 to 1,000; 1,000 to 2,500; and 2,500 to 5,000) to represent each of the 20 educational service center regions in Texas. In this manner 183 vocational administrators, 92 vocational supervisors, 103 vocational counselors and 50 Texas Education Agency consultants were selected for the sample.

Before mailing the questionnaires to the sample, sent was a pre-letter with an enclosed copy of the questionnaire to the superintendent or director of each of the members of the sample. Two weeks later in June, 1978, the questionnaires were sent to the individuals in the sample. We received 100 usable returns. No attempt was made to follow up and get a higher rate of return because we were only seeking responses from those with initial commitment and concern.

The results from the questionnaire were used in planning the handbook and in developing its content. The priorities, observations and questions were also used to implement the inservice workshops conducted on another project and in designing the preservice courses in vocational special needs. This was an example of the coordination that is possible in the university setting. The questions and comments that were written by the vocational educators on the questionnaire were cut apart and used as stimuli to generate the content of the handbook. The ranking of the importance of the topics provided direction regarding which topics should be included in the handbook.

Vocational adjustment coordinators handbook survey. Through contacts at the Texas Education Agency and within the Texas Association of Vocational Adjustment Coordinators (TAVAC), we became aware of the need to develop a handbook for the Vocational Adjustment Coordinators (VAC) in our region. As this activity fell within the goal of increasing the access of handicapped students into vocational programs, and was similar in nature to the objective of developing an administrator's handbook, we adapted the administrator's handbook survey instrument and added some items at the request of the VAC handbook committee. It was not intended that we would complete the VAC handbook, but provide assistance for developing it. The actual writing and printing of the VAC handbook will be done by members of TAVAC in cooperation with the Texas Education Agency.

The VAC handbook survey instruments (See Appendix B) were distributed at the Annual Conference of the Texas Vocational Adjustment Coordinators in August, 1978. All but 7 of the 174 completed surveys were identified as having been filled out by VAC's. This represents about one third of the VAC's in Texas.

The results from the questionnaires were conveyed to the TAVAC Board of Directors and then to the Annual Meeting in August, 1979. In addition to identifying the most important topics the results indicate the amount of time the VAC's spent on various duties during an average month. As The Texas Education Agency finalizes its new secondary curriculum plans for handicapped students and re-defines the job description for VAC's, the VAC handbook will be written, but this product will not be available until well after the funding for the current project has terminated.

Experts in Vocational Education and Special Education

In addition to availing ourselves to the expertise of the faculty at Texas A&M University, the project staff was able to consult, at no expense to this project, with members of the advisory committees of

other vocational special needs projects affiliated with the Vocational Sepcial Needs Program. Presenters at the inservice workshops were another particularly valuable resource from whom we were able to informally gain many valuable insights into the particular training needs for educators serving the vocational needs of secondary students.

Three levels of consultants were used in developing the products for this grant: (a) The modified Delphi approach, used in the studies of entry level competencies for handicapped students entering regular vocational programs, expert teachers from vocational education and special education. (b) Anecdotal records were collected from teachers throughout Texas and these provided examples of successes and problems giving substance to the content of the handbook. (c) Individuals with particular areas of knowledge assisted in writing various chapters for the administrator's handbook.

Expert teachers and the entry level competencies study. The entry level competencies study was designed to determine what competencies would be required of any student before entering a regular vocational program. Then a subsequent phase of the study determined which of these competencies could be attained by students who had the various handicapping conditions. The study also identified what accommodations or assistance the handicapped students would require in order to attain these competencies. These studies were conducted in the areas of agricultural, auto mechanics, and homemaking education -- the three largest occupational education programs in Texas.

The vocational area consultants in each of these occupational education programs were asked to identify the best teachers in their areas. These teachers were contracted by letter and phone and agreed to participate in the study in return for the small honorarium that was offered for their services. These vocational teachers were asked to list the competencies that they felt were necessary for any student entering the first year course in the occupational area that they taught. Through succeeding steps of the modified Delphi approach

the list was refined and the items on the list were given levels of importance according to the consensus that was arrived at by the group through the repeated mailings of questionnaires.

Special education teachers familiar with secondary programs for vocationally training handicapped students were identified through consultants at the Texas Education Agency and the regional education service centers. The special education teachers were sent the list of competencies which had been developed by the vocational teachers. The special education teachers identified the accommodations and assistance, if any were needed, that would be required by handicapped students from each of the main handicapping condition categories in order to achieve these entry level competencies. Additional details on these studies may be found in Appendices C, D, and E, or in the disseratations by Davidson, Parrish, and Swinney cited in the references of this report.

Teachers providing anecdotal records. Through the contacts made by the Vocational Special Needs Program at Texas A&M University in conducting regional inservice workshops on other grants, we were able to identify teachers who had had interesting encounters with handicapped students in their regular vocational education classes. These selected teachers were supplied with a blank tape and asked to record some of the incidents and impressions they had which would reflect on successes and problems from which other vocational teachers might learn. These tapes were transcribed and read by the project staff to provide additional background for developing the chapters of the administrator's handbook.

Writers for the administrator's handbook. Most of the chapters in the administrator's handbook were written by individuals directly associated with the project or contributed by other members of the staff of the Vocational Special Needs Program at Texas A&M University depending on their area of knowledge and interest. In addition, a practicing teacher was asked to help with the section on teaching techniques.

In developing the administrator's handbook, efforts were made not to duplicate the materials produced by other similar projects. Other handbooks had come out describing handicapped individuals and their characteristics and learning needs. For this project it was decided that we should produce a handbook that would focus on the needs that an administrator or teacher would have in designing a program that would meet the needs of the individual student. Other handbooks had been produced which addressed the vocational preparation of handicapped students from the point of view of separate vocational education for the handicapped (VEH) classes. In developing our handbook we focused on the aspects of placing and teaching a student in the regular classroom or shop. We wrote to the vocational administrator in order to give him or her the materials that would help in setting up inservice activities for teachers in regular vocational programs which would be receiving handicapped students.

Computer Literature Search and Continuing Review

The first phases of the literature search for this project utilized available articles and resources from the holding of the main library at Texas A&M University, the Sterling C. Evans Library. The Vocational Special Needs Program at Texas A&M has extensive holdings in the area of mainstreaming handicapped students in secondary and vocational programs, and this too was used. The initial review of the literature focused on the background and interpretation of the federal laws and resulted in the production of the publication, Vocational Education for the Handicapped: Resource Guide to Federal Regulations, which is discussed in greater detail in the results section of this report.

As we received copies of the annual and five-year state plans for vocational and special education and began to communicate with individuals in the field and our advisory committee, we recognized that our emphasis for the administrator's handbook should be on those aspects of placement and programming in the least restrictive environment -- often

referred to as "mainstreaming." From this basis we conducted a computer search of literature indexed on ERIC trying to bring together the descriptors for all handicapping conditions and the descriptors for all vocational and secondary programs. From this search we obtained 204 citations going back to 1975. We also conducted computer searches on entry level competencies for agriculture, auto mechanics, and homemaking education, but came up with virtually nothing useful. Another search was conducted to pick up vocational education for the handicapped citations that were not picked up through the mainstreaming search.

After the literature from the computer searches was examined a hand search was conducted on a continuing basis throughout the project. This search included continued reference to the monthly publications from ERIC, to the professional journals from vocational education, special education, and advocacy groups, and to the resources discovered through our contacts with publishers and experts across the nation.

The results of this review of the literature may be seen in the products emanating from this project: the resources listed in the administrator's handbook, the bibliographies of the three dissertations, and the articles published or to be published as a result of the work done on this project.

Production of Handbooks, Dissertations, Articles and Presentations

The project staff members followed a careful plan in developing each of the products to meet the objectives of this grant. Based on the information collected through the needs assessment, the literature review, the advisory committee, and the teachers in the field, the project staff members developed an outline for each of the handbooks. Brainstorming sessions preceded drafts and revisions. The technical writer associated with the Vocational Special Needs Programs at Texas A&M University then edited and rewrote the drafts as necessary. After

finishing a draft of a section of the handbook, several others on our staff reviewed it for content as well as clarity.

The dissertations were produced by the individual authors in cooperation with their doctoral committees. However, here too the cooperation of other members of the Vocational Special Needs Program was helpful in designing, implementing, and reviewing the studies.

The presentations and articles that have come from this project to date have emanated from the needs assessment and the entry level competencies studies. These also followed the path of cooperation among the staff in the Vocational Special Needs Program at Texas A&M University. The majority of the presentations were co-authored and jointly presented. From these presentations and the feedback received from them, articles were prepared and submitted for publications to the professional journal addressing the concerns of vocational education for handicapped individuals.

RESULTS

The end results of this study may be divided into three categories: publications, presentations and attitude changes. These products include:

1. Two needs assessments,
2. Two handbooks,
3. Three dissertations,
4. Two journal articles, in press,
5. Thirty-two presentations at regional inservice workshops,
6. Three presentations at statewide inservice conferences,
7. Nine presentations at meetings of professional associations,
8. Increased cooperation between vocational education and special education professionals at state, local, and university levels.

In addition to these products, which have already been attained, the staff members associated with the Vocational Special Needs Programs at Texas A&M University will continue to publish articles and make presentations based on the information collected through this project.

Needs Assessment

The two needs assessments were addressed to different populations but for the same purpose: to determine what topics of inservice preparation vocational educators and special educators concerned with the vocational and career development of handicapped individuals would find most important for their own preparation and for the preparation of their colleagues and subordinates. No attempts were made to compare or contrast the results of these two parallel needs assessments.

Survey of vocational administrators, supervisors and counselors. The list of the most frequently mentioned important topics for inservice needs as reported by the sample of vocational administrators, supervisors and counselors was headed by the topic concerning the state

interpretations and guidelines for the programs serving the needs of handicapped students in vocational programs (48% of the sample mentioned this). Preparing, placing, and teaching techniques for handicapped students in regular vocational programs were tied for the second most frequently mentioned topic (28% of the sample mentioned each of these topics). Other frequently mentioned topics, in descending order of frequency, included: inservice personnel development (24%), curriculum and curriculum development (23%), funding (23%), safety (23%), assessing and diagnosing students entering the programs (20%), coordination among vocational education, special education and rehabilitation services (18%), state laws (18%), federal laws (17%), mainstreaming (15%), employment placement (15%), altering attitudes of non-handicapped students (14%), ARD and IEP meetings (14%), and preparing IEP's (13%). Other topics, receiving less than 10% of the responses, may be found in Appendix F.

The observations and questions sections of the survey were cut apart and used by the writers preparing the pertinent sections of the administrator's handbook. Many of these observations and questions may be found in the text or incorporated within the activities of the administrator's handbook.

Survey of vocational adjustment coordinators (VAC). The topics on the VAC handbook survey were each rated as to importance on a three-point scale and the averages of these rating were calculated across the respondents to the items. The highest average importance was given to the topic of supervising job training and placements. Other highly important topics included the job description of a VAC; assessing students' readiness for job training, placement or graduation; and definition of the instructional program conducted by a VAC. Using the list of most frequently mentioned important topics, the VAC's most frequently mentioned the job description of a VAC (50%), the classroom responsibilities of the VAC: what should be taught (44%), Federal and State Laws affecting the VAC instructional program (32%), counseling and guiding students (32%), graduation plan

and requirements of student graduation (31%), ARD and IEP meetings: who, how, what, where, when, etc., (30%), and how to develop potential employers (29%).

Another aspect of the VAC handbook survey instrument that is useful in determining the priority of necessary skills for inservice or preservice training is the average percent of time VAC's spend on duties during an average month. The VAC's were asked to use a non-exclusive percentage of time in estimating their duties. Thus, if a VAC spent 10% of his time counseling students and 10% of his time transporting students but these activities occurred simultaneously, the VAC was asked to mark both duties as 10%. The investigators summed the percents for each VAC and normed them to achieve a total of 100% time for each VAC. Thus the results reported here may be underestimates of the actual time spent due to simultaneous overlapping of the performance of duties. This summation and norming process accepted missing data as 0% and was included in the averaging calculations, so there may be another souce of underestimation. Nonetheless, we figured this would be the best way to handle the data and achieve a ranking of the duties.

VAC's in Texas reported spending the most time counseling students on the job site or elsewhere away from the school (9.5% of the average month) and engaging in public relations and salesmanship (9.5% of the average month). Other duties requiring more than 5% of the time spent during an average month were teaching pre-vocational classes (9.0%), counseling students at school (8.7%), placing students on jobs (7.9%), supervising students on jobs (7.6%), filling out required paperwork (6.9%), developing jobs with potential employers (6.0%), and traveling between schools and job sites (6.0%).

Other more specific details concerning topics that were cited as important by fewer VAC's and duties that were reported as taking up less than 5% of the average VAC's average month are reported in Appendix G. Since many of the topics given high rankings of importance are currently topics under consideration as policy develops at the

Texas Education Agency, and since the Texas Education Agency is also redefining a job description for the VAC, the project staff came to the conclusion that a VAC handbook would be a more useful and lasting tool if it were written after the policy decisions had been finalized.

Entry Level Competencies for Handicapped Students

Three dissertations were produced with partial support from this grant. The dissertations were designed to identify the competencies needed by students to enter vocational education programs in agriculture, auto mechanics, and homemaking (Parrish, 1978; Swinney, 1978; and Davidson, 1979). A further purpose of these dissertations was to determine whether these competencies could be attained by students with certain handicapping conditions. Each of these studies produced a list of basic competencies that would be required of all students entering the regular vocational program. In all three studies the vocational teachers placed the greatest importance on social maturity skills. In general, the special education teachers felt that while most handicapped students already possessed these entry level skills, they could be supplied with those entry level skills that they might be missing. The special services suggested to help the handicapped students achieve the missing entry level competencies included the presence of a teacher aide in the vocational classroom, modification of written materials to accommodate the reading levels of the handicapped students, individualizing instruction, direct assistance by the special education teacher through the resource room, modifying the vocational curriculum and equipment, and counseling the student.

Appendices C, D, and E contain the abstracts and selected tables depicting the results obtained from these dissertations. For those seeking greater detail we recommend that you look at the actual dissertations soon to be available through University Microfilms Dissertations Abstracts International.

Products and Dissemination

The yield from the needs assessments, the dissertations and the interviews with teachers provided the basis from which formal products were developed to meet the goal of improving the accessibility of the handicapped to appropriate vocational education experiences. The project staff has accomplished its objectives by producing two handbooks for vocational educators:

Halloran, W., Foley, T. T., Razeghi, J. A., and Hull, M. Vocational Education for the Handicapped: Resource Guide to Federal Regulations. Austin, Texas: Texas Education Agency, 1978.

and

Clark, D. L., Foley, T., Kok, M., Turner, K., and Wright, L. Making Mainstreaming Work: A Handbook for Vocational Administrators. College Station, Texas: Texas A&M University, College of Education, 1979.

These handbooks are attached to this final report as Volume Two and Volume Three, respectively, or they may be ordered separately from the publishers at cost for reproduction and shipping. As of this writing the Texas Education Agency has printed and distributed 3,500 copies of Vocational Education for the Handicapped: Resource Guide to Federal Regulations. Texas A&M University has printed and is distributing 1,500 copies of Making Mainstreaming Work: A Handbook for Vocational Administrators. Additional copies will be printed if needed.

Two journal articles have been prepared for publication and have been accepted pending editorial changes by the authors:

Parrish, L. H. Entry level competencies for handicapped students in vocational agriculture. Career Development for Exceptional Individuals (in press).

and

Davidson, J., Swinney, S., and Parrish, L. Access strategies for the handicapped in vocational education. The Journal of the National Association of Vocational Education Special Needs Personnel (in press).

Reprints of these articles will be available at a later date from the publishers or from the authors. We expect that the research conducted through the support from this grant will continue to have a ripple effect, generating journal articles not only from the staff associated directly with the project, but also from vocational special needs professionals across the nation.

Presentations at inservice workshops provided two-way communications. The data collected through this project was disseminated through these workshops while at the same time feedback was received concerning the materials. These inservice workshops for educators serving the vocational needs of handicapped students were partially supported by a grant from P.L. 90-35, Part F, Section 553 (EPDA), (from 09/01/77 to 12/20/78) and by a grant from the Texas Education Agency under the provisions of Section 130, P.L. 94-482 (from 07/01/78 to 06/30/79).

During the course of this project information and materials from the project were included in 32 regional workshops at the following locations in Texas: Abilene, Aldine, Amarillo, Austin, Corpus Christi, Dallas, Deer Park, Edinburgh, El Paso (2), Fort Worth (2), Grand Prairie, Houston, Huntsville, Lubbock, Midland/Odessa, Mount Pleasant, Odessa, Rockdale, San Antonio (2), Schulenburg, Silisbee, Victoria, Wichita Falls (2), Ysleta. Over 2,000 professionals involved in vocational special needs attended these regional workshops. They and their students will continue to benefit from the information collected through this study.

Participation by the principle investigator and other staff members from the Vocational Sepcial Needs Program at Texas A&M University in three state wide workshops allowed further dissemination of information collected for the handbook on mainstreaming and of the results from the studies on access strategies. These statewide workshops were: "Statewide Workshop: Vocational/Special Needs Students," April 3, 4, and 5, 1978, Austin, Texas (over 150 participants); "Team Leadership Training in Vocational Special Needs," April 16, 17, and

18, 1979, College Station, Texas (over 300 participants); and "Project ENCOUNTER -- Mainstreaming the Handicapped," May 22, 23, and 24, 1979, Stillwater, Oklahoma (over 50 participants).

Additional presentations were made at professional meetings. This allowed for disseminating information collected through the project to a large audience from state, regional and national experts and practitioners. Presentations which included information collected for the handbooks and information from the entry level competencies studies were made at the following professional meetings:

1. Texas Council for Exceptional Children, San Antonio, Texas, August, 1978;
2. Annual Workshop of the Texas Association of Vocational Adjustment Coordinators, Houston, Texas, August, 1978;
3. Annual Texas Vocational Counselors Convention, San Antonio, Texas, August, 1978;
4. BOAE Region VI Inservice Training for Vocational-Technical Personnel, Dallas, Texas, October, 1978;
5. The American Vocational Education Research Association -- Research Section of the New and Related Services Division, 72nd Annual Convention of The American Vocational Association, Dallas, Texas, December, 1978;
6. Council for Exceptional Children National Topical Conference on Career Education for Exceptional Individuals, St. Louis, Missouri, February, 1979;
7. Texas Vocational Teacher Educators Association Meeting, Austin, Texas, April, 1979;
8. Council for Exceptional Children, 57th Annual International Convention, Dallas, Texas, April, 1979;
9. Texas Association of Vocational Adjustment Coordinators Annual Conference, Fort Worth, Texas, August, 1979.

Other projects conducted by the Vocational Special Needs Program at Texas A&M University will continue the dissemination activities of the information collected through this project. Graduate and undergraduate courses, as well as inservice workshops, plan to make use of the handbooks as supplemental readings for the instruction. Presentation proposals have been submitted for several national professional meetings

to be held in the coming year. These activities of disseminating the information and materials developed through this project will continue as members of the Vocational Special Needs Program at Texas A&M University continue their professional commitments to work with teachers and teacher educators to meet the vocational and career training needs of handicapped youth.

Cooperation and Coordination

In order that a research project will yield a benefit, it has to be coordinated with the professionals in the field who are likely to use the information obtained from the study. The cooperation of the practicing educators in secondary vocational special needs is essential not only in collecting the information needed for the research project, but also in implementing the findings to improve the accessibility of vocational programs for handicapped students. It is not sufficient that one group of practitioners be involved with the research project when the delivery of instruction and services will involve the team work of both vocational and special educators at all levels of personnel development, policy making and direct delivery of instruction and related activities.

The staff members on this project have been able to encourage as well as witness cooperation and coordination between vocational and special educators. This increased communication has occurred within the university level teacher training activities, at the state agency level, and at the local school district level.

Within Texas A&M University, this project along with the other projects within the Vocational Special Needs Programs has contributed towards increasing the communications between those departments emphasizing special education and those departments emphasizing vocational education in their teacher training curricula. This cooperation has led to the inclusion of vocational and career topics in the special education teacher preparation courses. Skills, knowledge and competencies related to teaching handicapped students

have been infused in teacher education courses in industrial arts, vocational industrial education, technical education, agricultural education, educational administration, and the graduate programs in those areas.

The activities of the Vocational Special Needs Programs at Texas A&M University have also publicized the needs for additional training in meeting the needs of handicapped students in vocational programs. As the staff conducted interviews, collected data, and disseminated the partial results of this project, teachers and administrators in the field realized their need for additional training in this area. Many have come to Texas A&M University and other universities to further their educational pursuit and to train themselves to be leaders in this area.

The project staff was placed in a position of observing a great deal of cooperation between the Special Education Department and the Occupational Education and Technology Department at the Texas Education Agency. We were always given the best answer available to our questions. Individuals at the Texas Education Agency, notably Eleanor Mikulin, Leo Schreiner, and Hayden McDaniel, were particularly helpful in securing information and documents in response to our every request. If they did not know the answer they tracked it down, or they referred us to another individual in another department who could help us. Without this assistance, the project staff would have had much less to show for their efforts.

Our interviews at the local school level allowed us to be advocates for handicapped students while at the same time supporters of the vocational educators' points of view. This allowed us not only to gain valuable insights from these educators in the field, but also to share some of our concerns and awarenesses with them. We were able to encourage the vocational educators to become more involved in the placement and IEP development processes. At the same time we were able to suggest to special education teachers that

they continue to support the handicapped student and the vocational teacher after the student has moved out of the special education classroom into the regular vocational program.

Every school we visited demonstrated a sincere effort to meet the needs of handicapped students in the best way available. Every school had elements of a program that were working to meet these needs, but progress must still be made before every school can claim to have a comprehensive continuum of services available to meet the needs of every handicapped secondary student in the least restrictive environment.

Through this cooperative effort that has been established during the development of the two handbooks and the three dissertations, this project will yield greater benefits. The hundreds of professionals who participated in developing these materials will now be more likely to implement them, not only because they participated in developing, but also because the handbooks and dissertations reflect the pragmatic considerations that emerged through this cooperative effort.

CONCLUSIONS

The objectives of this study were achieved and surpassed. The goal of the study was to design and test strategies for improving the accessibility of the handicapped to appropriate vocational education experiences. The original objectives of the proposed study were revised on October 15, 1977, following the "Notification of Grant Award" and the reduction of requested funds.

In meeting the goal to improve the accessibility of the handicapped to appropriate vocational education experiences the following objectives were accomplished:

1. Administrator's Handbook. Two handbooks for vocational administrators were developed with assistance from this project, and a needs assessment outlining a third handbook was conducted. The first handbook is an explanation and topical index for the three major federal laws affecting vocational education for handicapped secondary students, Vocational Education for the Handicapped: Resource Guide to Federal Regulations (Halloran, Foley, Razeghi, and Hull, 1978). The second handbook is a guide for vocational directors which leads them through the concept, laws, funding, and implementing processes of providing vocational education for handicapped students within the regular vocational program, Making Mainstreaming Work: A Handbook for Vocational Administrators (Clark, Foley, Kok, Turner, and Wright, 1979). The third handbook which is still being developed will address the administration of vocational adjustment classes or work experience coordination for handicapped students. The project assisted in developing a needs assessment and an outline for this handbook, but its completion awaits a reorganization of the program in Texas.

2. Access Materials for Open Entry/Open Exit Model. Three studies identified competencies needed by any student entering a regular vocational program in agriculture, auto mechanics, and homemaking education. These dissertations also identified by handicapping condition which of these competencies were likely to have been attained already by handicapped students. In addition the dissertations

identified what assistance or accomodation might be needed to bring up to the entry level requirements the skills of the remaining handicapped students. The information collected through these studies was disseminated through a series of inservice workshops, preservice courses, professional meetings, and articles submitted to professional journals.

As discussed in the "Impact of Budget Changes on Scope of Work," due to budget restrictions, the project was not able to study the entry level skills required in other vocational program areas such as office occupations, health occupation, distributive education, and other areas of trade and industrial education. The exit component of open entry/open exit programming was difficult to study because no programs were identified which embraced this concept. The student who entered the regular vocational program was admitted with the anticipation of being able to complete the full requirements of the course. This barrier to open entry/open exit programming is the result of an interpretations of federal and state requirements that the vocational teachers is accountable for training students to enter the occupational field at the level for which the course was designed. What usually happens is the student either completes the course as intended, or the student had difficulties in the course, and the student's class placement is reconsidered upon review of the student's IEP. The success of the student, then, determines the exit level and the job placement that is sought. As individualized educational programming becomes better implemented through local and state policies and practices the open entry/open exit concept will be easier to study and evaluate. The Texas Education Agency is piloting a secondary curriculum plan for handicapped students which will provide the basis for improving the access of handicapped students to vocational programs as a result of actual practices rather than just conceptual abstractions of policy.

RECOMMENDATIONS

A study such as this introduces more questions that it resolves. The needs assessments revealed many areas of concern for practicing vocational special needs personnel. The handbooks and entry level studies addressed some of these concerns but these results must be continually updated and the details of implementing them completed and evaluated. The following recommendations can be made for continued study and development in opening vocational programs to handicapped students:

1. The handbook on the federal regulations should be continually updated as new laws, regulations and guidelines become effective. For example, the new interpretations of the Comprehensive Employment and Training Act (CETA) now includes handicapped individuals as eligible without the earlier income level restraints. The whole relationship between CETA and vocational education programs including handicapped individuals should be explored and vocational special needs personnel should be made aware of this resource. Another example would be the recent issue of the Office for Civil Rights' guidelines on non-discrimination on the basis of handicap. These guidelines should be incorporated into a revision of the handbook on the federal regulations. As amendments to the Vocational Education Act of 1963 and the Education of the Handicapped Act are enacted and interpreted, these should also be incorporated in revisions. Court decisions and administrative hearings should be reviewed as they develop the interpretation of the constitutional and legal issues for equal opportunity for the handicapped in the area of vocational education and employment training.

2. The vocational administrator's handbook was designed in a loose leaf format in order that additions and changes could easily be made, as well as to facilitate removing pages as needed for reproducing sections as handouts or as overhead transparencies. (Note that those copies of the administrator's handbook that accompany the final report for this project were bound together and not in loose leaf format for ease of distribution.) The administrator's handbook should be

used freely as an outline for a vocational administrator's notebook on inservice for vocational special needs. As new information becomes available it may be added to the appropriate sections or new sections may be developed to address local or individual needs. As this handbook was developed with the imput of vocational educators in the field it is expected that they will put it to use in a way that will reflect a pragmatic approach.

3. As the project staff members were developing the handbook on the federal laws and the handbook on mainstreaming handicapped students in regular vocational programs, state laws and state plans were examined in some detail. It became readily apparent that while the federal model provides policies and guidelines, the actual implementation results from state and local policies and practices. Therefore, we suggest that the vocational and special education personnel at each state and local level jointly develop a handbook by which they may coordinate meeting the needs of each handicapped student in the area of vocational education and occupational training.

4. Continuing efforts should be made to enhance communications at and between the state and local programs. Special education should make plans involving vocational educators whenever secondary programs are being discussed. Likewise, vocational educators should involve special educators in every vocational program to ensure that handicapped students will not be denied an equal opportunity to benefit from every vocational program. Teachers and administrators need to be aware of the communications and programs across the cooperating disciplines. State directors and consultatns should ensure that local teachers and administrators in the cooperating disciplines are also aware of the communications sent to those within their own discipline.

5. The results of this research must be evaluated in the context of whether they actually succede or fail to provide handicapped students with access to appropriate vocational education placement. This ultimate evaluation must be accomplished in every day educational practice in order for it to have validity. Thus these research results

must be used with students. Research development of placement models or innovative programs must be activated to implement the results of this study.

6. If the open entry/open exit concept is to be tested to the point of acceptance, then further incentives must be provided to achieve a broader use of this model. It is a great idea to take a student at the time when that student has achieved entry level skills, and then training that student until the student has achieved exit skills matching the student's maximum potential, and then placing that student in a job that provides independence and advancement. Advancing an idea takes more than rhetoric. If state and federal grant agencies would support open entry/open exit programs with funds to cover the transition of scheduling and curriculum, then handicapped students would have greater opportunities to maximize their potential under this kind of program.

7. The validity of the entry level competencies studies may be investigated through subsequent case studies of handicapped students who possess the entry level competencies identified by this project and are actually placed in agriculture, auto mechanics or homemaking classes. Then the students' actual progress in school and on the job may be recorded and their success compared with the findings of this study.

8. The entry level competencies studies should be duplicated in other vocational areas and the results compared.

9. Additional data should be obtained relating to the readability levels of texts and supplemental readings required for vocational preparation.

10. More information should be collected on what additional services are required by handicapped students entering vocational programs. These needed services could be compared with the services that are actually available to handicapped students in a vocational class. Perhaps this data could be collected from an analysis of students' individual education plans and reviews.

11. Placement of students in vocational programs should be

done with consideration given to matching the students' capabilities with the entry level requirements, thus providing a greater compatibility between the student and the vocational area.

12. Prevocational classes should use the entry level requirements as a basis for developing curricula for students planning to enter a vocational program.

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* The references listed in this bibliography are those cited in the narrative of the final report. Other references may be found in the appendices and in accompanying volumes.

APPENDIX A

Vocational Administrator's Handbook Survey Instrument

For a discussion of the information in Appendix A see pages 9, 10, 21, 27, 29.

SURVEY OBJECTIVES

Access Strategies for the Handicapped in Vocational Education

Texas A&M University

Project ENCOUNTER

(Encouraging Career Opportunities Unlimited Through Education and Rehabilitation)

According to the proposed Texas State Board of Education Policies, students with handicaps need special educational services because they are physically, visually, hearing, or speech handicapped, mentally retarded, emotionally disturbed, language or learning disabled, pregnant, or have a combination of these handicaps. Prior to the Vocational Education Act Amendments of 1976, programming for these students emphasized placing them in separate programs. But while continuing to have states spend at least 10% of the federal Vocational Education funds for handicapped persons, the current regulations require that "the state shall use these funds to the maximum extent possible to assist handicapped persons to participate in regular vocational education programs" (45 CFR 104.312).

Recent state laws and guidelines have also affirmed that qualified handicapped individuals must have the opportunity to learn vocational skills with their non-handicapped peers when this appropriately meets their needs and abilities. In some instances, these laws and guidelines will cause vocational administrators and teachers to implement changes in existing policies and procedures. Some of these will involve providing vocational education in the least restrictive environment, multiple levels of exit competencies, and inservice programs for vocational educators.

The staff at Project ENCOUNTER serves vocational educators through personnel development and resource materials, thus helping them implement these changes. The grants supporting this work are funded by the Bureau of Occupational and Adult Education, U.S. Office of Education, and work is being conducted in cooperation with the Divisi[illegible]ondary Programs, Occupational Education and Technology, Texas Edu[illegible]ion Agency. To tailor our activities to your needs, we are sending out the enclosed survey.

Our first objective is to develop a handbook which will respond to

the needs, concerns and problems faced by professionals who are implementing vocational programs for secondary students or planning a comprehensive continuum of services for them. However, this response can only be possible if educators make their needs and experiences known. With the participation of all concerned, this survey will lead to a useful tool.

Our second objective is to cosponsor a series of regional inservice workshops in Texas. In the past two years Project ENCOUNTER has provided speakers and consultants at no local cost to regional inservice workshops on vocational special needs. In the coming year, with continued funding, we will continue these workshops. But, to choose topics that successfully meet the needs of workshop participants, we must communicate with vocational educators at the local school districts or regional service centers. The enclosed survey will be one way to make this possible.

The survey is being sent to a sample of state and local vocational directors, consultants, supervisors and teachers who were selected from the 1977-1978 Texas School Directory. Respondents can also recommend other participants. A modified version of the survey form will be sent to a limited sample of special education, rehabilitation and other agencies personnel who provide related services to handicapped students in regular vocational education programs. The survey instrument itself has a list of topics which may be included in the handbook or addressed at workshops; it also leaves space for respondents to suggest additional topics. We are asking respondents to contribute their questions, comments, and insights, and examples of their programming for the handicapped in vocational education — successes and problems.

We are determined to build a good handbook and conduct workshops that will address the questions, reflect the procedures, and meet the goals of vocational educators, thus producing an honest picture of the problems and benefits to be expected from placing handicapped students in regular vocational classes. We believe we can with your support. After the handbook is completed, we will send a free copy to each person who has returned a completed survey instrument or has assisted in reviewing the preliminary handbook drafts. Additional copies will be available at cost.

SURVEY INSTRUMENT

Access Strategies for the Handicapped in Vocational Education
Project ENCOUNTER Texas A&M University

General Information and Directions:

This form will help Project ENCOUNTER personnel collect information for regional inservice workshops and for a handbook. This handbook will guide educators who are providing handicapped secondary students with vocational opportunities in a least restrictive environment. In spite of our emphasis on vocational education for the handicapped we will welcome information on any other aspects of secondary programming.

PLEASE NOTICE THE FOLLOWING POINTS BEFORE YOU GO ON:

- This form has eight sections:
  - DEMOGRAPHIC INFORMATION
  - ITEM A. OBSERVATIONS
  - ITEM B. QUESTIONS
  - ITEM C. IMPORTANCE
  - ITEM D. FIVE MOST IMPORTANT TOPICS
  - ITEM E. EXAMPLES
  - ITEM F. MATERIALS
  - ITEM G. VOCATIONAL TEACHERS AND OTHER RESPONDENTS
- Refer to each section for specific instructions and examples.
- Don't let the size of this form fool you. We anticipate that no respondent will do every item or every topic. Feel free to only respond to items that interest you or about which you are especially concerned.
- Skip any items that do not apply to you.
- If any item needs clarification, phone us or return this survey form asking us to phone you.
- You may copy this form for your files. Also feel free to pass copies to your friends or complete this form together. More than one person can respond to many of the items.
- Attach additional pages if necessary. Clearly mark such pages with the appropriate item or topic numbers.
- The pages will be cut along the lines, so that all answers to our topics can be analyzed together. Therefore, please respond only in the spaces provided, and do not write on the backs of the pages.
- Every response will be considered in developing the workshop and handbook topics. You response, whether pro or con, is valued input.

Please return this survey instrument in the enclosed self-addressed, stamped envelope to:

Tico Foley
Vocational Special Needs Program
College of Education
Texas A&M University
College Station, Texas 77843

Thank you.

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SURVEY INSTRUMENT

Access Strategies for the Handicapped in Vocational Education
Project ENCOUNTER Texas A&M University

Demographic Information

CONFIDENTIALITY: Unless given your permission in writing, all personally identifiable information will be confidential; it will not be published in any form which identifies the participants or their employers. The names will be used only for records and follow-up clarification. All other information will be grouped by descriptive categories.

PLEASE FILL IN THE BLANKS WHICH APPLY TO YOU:

Name _____

Position or Title _____

Grades Served _____

Ages Served _____

Subjects Taught _____

Vocational Certifications _____

Special Education Certifications _____

District or Area _____

City _____

Rural or Urban _____

ESC Serving Your School _____

Estimate the number of handicapped students who were being mainstreamed in a vocational education class with nonhandicapped classmates in your district during the 1977-1978 school year..... _____

Estimate the number of handicapped students who will be mainstreamed in a vocational education class with nonhandicapped classmates in your district during the coming 1978-1979 school..... _____

I would like my name placed on a list of those who may be invited this fall to field-test, review and critique preliminary drafts of the handbook before final publication (the number of field reviewers may be limited due to cost limitations)..... Yes No
Circle One

I would like to be contacted about helping Project ENCOUNTER cosponsor a regional inservice workshop on vocational education for handicapped students during the 1978-1979 school year. Yes No
Circle One

SURVEY INSTRUMENT

Access Strategies for the Handicapped in Vocational Education
Project ENCOUNTER Texas A&M University

ITEM A. Observations

Read over the tentative handbook and workshop topics on the following six pages, and in the space provided after each topic write any comments, insights, or discoveries that you would like to share with other vocational educators. If necessary to cover your interest add other topics, and feel free to point out problems and concerns as well as successes and insights. Attach additional pages if necessary. Skip topics when appropriate.

EXAMPLE A

Lunchtime OBSERVATIONS

When redesigning our cafeteria we made the food counter accessible to students using wheelchairs, and introduced carts for handicapped students to carry their trays on. Call us for information on design and manufacturer at 555-5555. Ask for the cafeteria manager, Mrs. Jones.

In the above example, the respondent is sharing information on two alterations which help make food services available to handicapped students. Because the respondent wants to share more information on these alterations, she has supplied a phone number and a name to contact. Project ENCOUNTER staff will contact Mrs. Jones by telephone and if appropriate make a visit to the school site for detailed information.

a 1. History and Rationale of Handicapped Persons' Rights OBSERVATIONS

a 2. Laws: Federal OBSERVATIONS

a 3. Laws: State OBSERVATIONS

a 4. Texas Education Agency Regulations and Guidelines OBSERVATIONS

a 5. Local Educational Agency Policies, Plans and Procedures OBSERVATIONS

a 6. Local Advisory and Steering Committees OBSERVATIONS

a 7. Developing Programs/Writing Proposals and Applications OBSERVATIONS

a 8. Inservice Personnel Development OBSERVATIONS

a 9. Determining the Least Restrictive Environment — OBSERVATIONS

---

a10. Mainstreaming — OBSERVATIONS

---

a11. VocEd/SpEd/TRC Coordination — OBSERVATIONS

---

a12. Handling the Concerns and Complaints of Parents, Advocates and Government Agencies — OBSERVATIONS

---

a13. Resource People and Groups — OBSERVATIONS

---

a14. Community Resources — OBSERVATIONS

---

a15. Resource Materials — OBSERVATIONS

---

a16. Using Paraprofessionals, Aides, and Volunteers — OBSERVATIONS

a17. Exemplary and Innovative Programs — OBSERVATIONS

a18. Curriculum and Curriculum Modification — OBSERVATIONS

a19. Funding — OBSERVATIONS

a20. Selecting and Evaluating Materials — OBSERVATIONS

a21. Involving Parents — OBSERVATIONS

a22. ARD and IEP Meetings — OBSERVATIONS

a23. Preparing Individualized Educational Programs (IEP) — OBSERVATIONS

a24. Preparing Handicapped Students for Entering Regular Vocational Classrooms — OBSERVATIONS

a25. Placing Students in Vocational Education Programs OBSERVATIONS

a26. Assessing and Diagnosing Students Entering Programs OBSERVATIONS

a27. Procedural Safeguards, Due Process, Hearings, Etc. OBSERVATIONS

a28. Teaching Techniques OBSERVATIONS

a29. Counseling and Guidance OBSERVATIONS

a30. Characteristics, Abilities, and Differing Severities of the Nine Handicapping Conditions OBSERVATIONS

a31. Altering Attitudes of Non-Handicapped Students OBSERVATIONS

a32. Safety OBSERVATIONS

a33. Individualizing Instruction OBSERVATIONS

a34. Managing Student Behavior OBSERVATIONS

a35. Preparing Handicapped Students for Parenting and Community Living OBSERVATIONS

a36. Providing Learning Support and Assistance in Addition to the Regular Vocational Education Program OBSERVATIONS

a37. Barriers OBSERVATIONS

a38. Facilities and Equipment OBSERVATIONS

a39. Measuring and Evaluating Students in Vocational Education OBSERVATIONS

a40. Employment Placement OBSERVATIONS

a41. Follow-Up Data OBSERVATIONS

a42. Follow-Up Services OBSERVATIONS

a43. Evaluating Programs OBSERVATIONS

a44. Definitions OBSERVATIONS

a45. Other. Please Specify OBSERVATIONS

a46. Other. Please Specify OBSERVATIONS

a47. Other. Please Specify OBSERVATIONS

a48. Other. Please Specify. OBSERVATIONS

SURVEY INSTRUMENT

Access Strategies for the Handicapped in Vocational Education
Project ENCOUNTER Texas A&M University

ITEM B. Questions

Read over the tentative handbook and workshop topics on the following six pages, and in the space provided after each topic write any questions, concerns, or problems you may like to see answered or addressed in the handbook or workshops. If necessary to cover your interests, add other topics. In this section, ask either general or specific questions, and the project staff will attempt to answer them in the handbook or workshops. Attach additional pages if necessary, and skip topics when appropriate.

EXAMPLE B

Lunchtime QUESTIONS

Some students have reported to the principal that other students are stealing money and food from the handicapped students during the noon meal. What can the school personnel do to change this?

In this example, the respondent is indicating a behavior problem that non-handicapped classmates have. This behavior may be common or scarce, but if it is important for successfully including handicapped students in regular vocational education programs, then it should be addressed by the handbook and at regional workshops.

b 1. History and Rationale of Handicapped Persons' Rights QUESTIONS

b 2. Laws: Federal QUESTIONS

b 3. Laws: State QUESTIONS

b 4. Texas Education Agency Regulations and Guidelines QUESTIONS

b 5. Local Educational Agency Policies, Plans and Procedures QUESTIONS

b 6. Local Advisory and Steering Committees QUESTIONS

b 7. Developing Programs/Writing Proposals and Applications QUESTIONS

b 8. Inservice Personnel Development QUESTIONS

b 9. Determining the Least Restrictive Environment	QUESTIONS
b10. Mainstreaming	QUESTIONS
b11. VocEd/SpEd/TRC Coordination	QUESTIONS
b12. Handling the Concerns and Complaints of Parents, Advocates and Government Agencies	QUESTIONS
b13. Resource People and Groups	QUESTIONS
b14. Community Resources	QUESTIONS
b15. Resource Materials	QUESTIONS
b16. Using Paraprofessionals, Aides, and Volunteers	QUESTIONS

b17. Exemplary and Innovative Programs	QUESTIONS
b18. Curriculum and Curriculum Modification	QUESTIONS
b19. Funding	QUESTIONS
b20. Selecting and Evaluating Materials	QUESTIONS
b21. Involving Parents	QUESTIONS
b22. ARD and IEP Meetings	QUESTIONS
b23. Preparing Individualized Educational Programs (IEP)	QUESTIONS
b24. Preparing Handicapped Students for Entering Regular Vocational Classrooms	QUESTIONS

b25. Placing Students in Vocational Education Programs	QUESTIONS
b26. Assessing and Diagnosing Students Entering Programs	QUESTIONS
b27. Procedural Safeguards, Due Process, Hearings, Etc.	QUESTIONS
b28. Teaching Techniques	QUESTIONS
b29. Counseling and Guidance	QUESTIONS
b30. Characteristics, Abilities, and Differing Severities of the Nine Handicapping Conditions	QUESTIONS
b31. Altering Attitudes of Non-Handicapped Students	QUESTIONS
b32. Safety	QUESTIONS

b33. Individualizing Instruction	QUESTIONS
b34. Managing Student Behavior	QUESTIONS
b35. Preparing Handicapped Students for Parenting and Community Living	QUESTIONS
b36. Providing Learning Support and Assistance in Addition to the Regular Vocational Education Program	QUESTIONS
b37. Barriers	QUESTIONS
b38. Facilities and Equipment	QUESTIONS
b39. Measuring and Evaluating Students in Vocational Education	QUESTIONS
b40. Employment Placement	QUESTIONS

b41. Follow-Up Data	QUESTIONS
b42. Follow-Up Services	QUESTIONS
b43. Evaluating Programs	QUESTIONS
b44. Definitions	QUESTIONS
b45. Other. Please Specify	QUESTIONS
b46. Other. Please Specify	QUESTIONS
b47. Other. Please Specify	QUESTIONS
b48. Other. Please Specify	QUESTIONS

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SURVEY INSTRUMENT

Access Strategies for the Handicapped in Vocational Education
Project ENCOUNTER Texas A&M University

ITEM C. Importance

Read over the tentative handbook and workshop topics on the following two pages, and indicate the importance you feel the topic has for vocational educators by circling the appropriate letters. Use the following key:

VI = very important--topic must be in handbook
SI = somewhat important--topic should be in handbook
I = important--topic could be in handbook
HI = hardly important--handbook could be complete without this topic
NI = not important--handbook would suffer with this topic
DK = don't know, neutral, not applicable, no opinion, etc.

EXAMPLE C

Lunchtime . . . . . VI SI I (HI) NI DK
Teacher Certification . . . . . VI SI (I) HI NI DK
Manpower/CETA Programs . . . . . (VI) SI I HI NI DK

In this example the respondent is indicating that "Lunchtime" probably should not be a topic in the handbook, "Teacher Certification" is optional, but "Manpower/CETA Programs" must be included.

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VI -- topic must be in handbook
SI -- topic should be in handbook
I -- topic could be in handbook
HI -- handbook could be complete without this topic
NI -- handbook would suffer with this topic
DK -- don't know, neutral, not applicable, no opinion

		very important	somewhat important	important	hardly important	not important	don't know
c 1.	History and Rationale of Handicapped Persons' Rights.....	VI	SI	I	HI	NI	DK
c 2.	Laws: Federal.....	VI	SI	I	HI	NI	DK
c 3.	Laws: State.....	VI	SI	I	HI	NI	DK
c 4.	Texas Education Agency Regulations and Guidelines.....	VI	SI	I	HI	NI	DK
c 5.	Local Educational Agency Policies, Plans and Procedures.....	VI	SI	I	HI	NI	DK
c 6.	Local Advisory and Steering Committees.....	VI	SI	I	HI	NI	DK
c 7.	Developing Programs/Writing Proposals and Applications.....	VI	SI	I	HI	NI	DK
c 8.	Inservice Personnel Development.....	VI	SI	I	HI	NI	DK
c 9.	Determining the Least Restrictive Environment.....	VI	SI	I	HI	NI	DK
c10.	Mainstreaming.....	VI	SI	I	HI	NI	DK
c11.	VocEd/SpEd/TRC Coordination.....	VI	SI	I	HI	NI	DK
c12.	Handling the Concerns and Complaints of Parents, Advocates and Government Agencies.....	VI	SI	I	HI	NI	DK
c13.	Resource People and Groups.....	VI	SI	I	HI	NI	DK
c14.	Community Resources.....	VI	SI	I	HI	NI	DK
c15.	Resource Materials.....	VI	SI	I	HI	NI	DK
c16.	Using Paraprofessionals, Aides, and Volunteers.....	VI	SI	I	HI	NI	DK
c17.	Exemplary and Innovative Programs.....	VI	SI	I	HI	NI	DK
c18.	Curriculum and Curriculum Modification.....	VI	SI	I	HI	NI	DK
c19.	Funding.....	VI	SI	I	HI	NI	DK
c20.	Selecting and Evaluating Materials.....	VI	SI	I	HI	NI	DK
c21.	Involving Parents.....	VI	SI	I	HI	NI	DK
c22.	ARD and IEP Meetings.....	VI	SI	I	HI	NI	DK
c23.	Preparing Individualized Educational Programs (IEP).....	VI	SI	I	HI	NI	DK
c24.	Preparing Handicapped Students for Entering Regular Vocational Classrooms.....	VI	SI	I	HI	NI	DK

VI -- topic must be in handbook
SI -- topic should be in handbook
I -- topic could be in handbook
HI -- handbook could be complete without this topic
NI -- handbook would suffer with this topic
DK -- don't know, neutral, not applicable, no opinion

		very important	somewhat important	hardly important	not important	don't know
c25.	Placing Students in Vocational Education Programs.....	VI	SI	I	HI	NI DK
c26.	Assessing and Diagnosing Students Entering Programs.....	VI	SI	I	HI	NI DK
c27.	Procedural Safeguards, Due Process, Hearings, Etc.....	VI	SI	I	HI	NI DK
c28.	Teaching Techniques.....	VI	SI	I	HI	NI DK
c29.	Counseling and Guidance.....	VI	SI	I	HI	NI DK
c30.	Characteristics, Abilities, and Differing Severities of the Nine Handicapping Conditions.....	VI	SI	I	HI	NI DK
c31.	Altering Attitudes of Non-Handicapped Students.....	VI	SI	I	HI	NI DK
c32.	Safety.....	VI	SI	I	HI	NI DK
c33.	Individualizing Instruction.....	VI	SI	I	HI	NI DK
c34.	Managing Student Behavior.....	VI	SI	I	HI	NI DK
c35.	Preparing Handicapped Students for Parenting and Community Living.....	VI	SI	I	HI	NI DK
c36.	Providing Learning Support and Assistance in Addition to the Regular Vocational Education Program.....	VI	SI	I	HI	NI DK
c37.	Barriers.....	VI	SI	I	HI	NI DK
c38.	Facilities and Equipment.....	VI	SI	I	HI	NI DK
c39.	Measuring and Evaluating Students in Vocational Education.....	VI	SI	I	HI	NI DK
c40.	Employment Placement.....	VI	SI	I	HI	NI DK
c41.	Follow-Up Data.....	VI	SI	I	HI	NI DK
c42.	Follow-Up Services.....	VI	SI	I	HI	NI DK
c43.	Evaluating Programs.....	VI	SI	I	HI	NI DK
c44.	Definitions.....	VI	SI	I	HI	NI DK
c45.	Other. Please Specify_____	VI	SI	I	HI	NI DK
c46.	Other. Please Specify_____	VI	SI	I	HI	NI DK
c47.	Other. Please Specify_____	VI	SI	I	HI	NI DK
c48.	Other. Please Specify_____	VI	SI	I	HI	NI DK

SURVEY INSTRUMENT

Access Strategies for the Handicapped in Vocational Education
Project ENCOUNTER Texas A&M University

ITEM D. Five Most Important Topics

Please turn back and read over the tentative topics on the preceding two pages. Recalling the purposes of the handbook and the workshops on vocational education for handicapped students, select the five most important topics and beginning with the most important, write the number corresponding to these topics in the spaces below.

RESPOND HERE:

First most important topic _____

Second most important topic _____

Third most important topic _____

Fourth most important topic _____

Fifth most important topic _____

SURVEY INSTRUMENT

Access Strategies for the Handicapped in Vocational Education
Project ENCOUNTER Texas A&M University

ITEM E. Program Examples

Please describe any programs or individual efforts for providing vocational education to handicapped students in a least restrictive environment or in a regular vocational education class. We will use this information to caution other educators about possible areas of difficulty, as well as point to examples of success. Obviously to be useful, the handbook and workshops will require sufficient detail so carefully describe what modifications, alterations, or supportive services were attempted. Include information on the outcomes. Attach additional pages if necessary, or supply your phone number and suggest a convenient time of day for the project staff to call and we will contact you for further information.

SURVEY INSTRUMENT

Access Strategies for the Handicapped in Vocational Education
Project ENCOUNTER Texas A&M University

ITEM F. Materials

Please send us documents, publications, local advisory council reports, evaluations, program applications, and other materials concerning policies, procedures, and practices in use (or being planned) for providing a comprehensive continuum of services for handicapped individuals in vocational education. If there is a cost involved, send a brief description of the materials and the project staff will contact you. Reviews of significant materials and resources will be included in the handbook and workshops.

SURVEY INSTRUMENT

Access Strategies for the Handicapped in Vocational Education
Project ENCOUNTER Texas A&M University

ITEM G. Vocational Teachers and Others

As mentioned earlier, this survey instrument has been sent to a small sample of vocational administrators, consultants, supervisors, and counselors. Please tell us if there are other individuals who you think could share information and questions about vocational education for handicapped secondary students. We are particularly interested in receiving additional input from vocational teachers who have faced handicapped students in their classrooms or who anticipate having handicapped students in their classes this coming school year. We will send a survey to the parents, students, or other professionals you recommend. Feel free to deuplicate this form for your files or to distribute it to your colleagues and acquaintances.

VOCATIONAL TEACHERS OR OTHER RESPONDENTS WHO SHOULD RECEIVE A COPY OF THIS SURVEY INSTRUMENT

Name _____

Address _____

City, State, Zip _____

Phone _____

Comments _____

Name _____

Address _____

City, State, Zip _____

Phone _____

Comments _____

Please return this Handbook/Workshop Input Survey Instrument to:

Tico Foley
Vocational Special Needs Program
College of Education
Texas A&M University
College Station, TX 77843

Thanks again.

APPENDIX B

Vocational Adjustment Coordinators Handbook Survey Instrument

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For a discussion of the information in Appendix B see pages 11,21.

SURVEY INSTRUMENT

VAC Handbook TEXAS A&M UNIVERSITY Project ENCOUNTER

This form will help TAVAC and Project ENCOUNTER, in cooperation with TEA, collect information for a VAC handbook. This handbook will be used by both the new VACs who have just been assigned to a school district and the experienced VACs who are looking for usable materials and an interpretation of the new laws, policies, and procedures.

Demographic Information

CONFIDENTIALITY: Unless given your permission in writing, all personally identifiable information will be confidential; it will not be published in any form which identifies the participants or their employers. The names will be used only for records and follow-up clarification. All other information will be grouped by descriptive categories.

PLEASE FILL IN THE BLANKS WHICH APPLY TO YOU:

Name _____

Position or Title _____

Number of Years as VAC _____

Grades Served _____

Ages Served _____

Subjects Taught _____

Vocational Certifications _____

Special Education Certifications _____

District or Area _____

City _____

Rural or Urban _____

ESC Serving Your School _____

Please return this completed survey instrument to:

Tico Foley
Vocational Special Needs Program, College of Education
Texas A&M University
College Station, Texas 77843

Importance

Read over the tentative VAC handbook topics on the following pages, and indicate the importance you feel the topic has for VACs by circling the appropriate letters. Use the following key:

I = important--topic should be in handbook
DK = don't know, neutral, not applicable, no opinion, etc.
NI = not important--handbook would suffer with this topic

EXAMPLE

Lunchtime . . . . . I DK NI
Teacher Certification . . . . . I DK NI
Manpower/CETA Programs . . . . . I DK NI

In this example, the respondent is indicating that "Lunchtime" probably should not be a topic in the handbook, "Teacher Certification" is neutral, and "Manpower/CETA Programs" must be included.

RESPOND HERE:

I = topic should be in handbook
DK = don't know, neutral, not applicable, no opinion
NI = handbook would suffer with this topic

important / don't know / not important

1. Definition of instructional program conducted by a VAC . . . . . I DK NI
2. Rationale, purpose, and goals of the VAC instructional program . . . . . I DK NI
3. Federal and state laws affecting the VAC instructional program . . . . . I DK NI
4. Job description of a VAC I DK NI
5. Competencies, characteristics, and certification of a VAC I DK NI
6. Contract details for VAC; ex., days, hours, transportation, administrative responsibilities, etc. . . . . I DK NI

I = topic should be in handbook
DK = don't know, neutral, not applicable, no opinion
NI = handbook would suffer with this topic

		important	don't know	not important
7.	Classroom responsibilities of the VAC; what should be taught	I	DK	NI
8.	Field job placement responsibilities of the VAC	I	DK	NI
9.	Supervising job training and placements	I	DK	NI
10.	Counseling and guiding students	I	DK	NI
11.	Follow-up data collection	I	DK	NI
12.	Training student to locate services after graduation	I	DK	NI
13.	Calendar with suggested dates for accomplishing responsibilities	I	DK	NI
14.	On-campus job placements	I	DK	NI
15.	Off-campus job placement procedures	I	DK	NI
16.	Business and management techniques	I	DK	NI
17.	Surveys of job potential in the community	I	DK	NI
18.	How to develop potential employers	I	DK	NI
19.	Public relations techniques to enlist the support of others as advocates and employers of the handicapped	I	DK	NI
20.	The role of the Texas Rehabilitation Counselor	I	DK	NI
21.	Child labor laws; wage and hour laws; affirmative action; etc.	I	DK	NI
22.	Graduation plan and requirements for student graduation	I	DK	NI
23.	Working with other school employees, ex: counselors, administrators, vocational teachers, academic teachers, etc.	I	DK	NI
24.	Mainstreaming the special education student in regular academic or vocational classes	I	DK	NI
25.	Parents' and students' rights	I	DK	NI
26.	Informing, involving, and counseling parents	I	DK	NI
27.	ARD and IEP meetings: who, how, what, where, when, etc.	I	DK	NI

I = topic should be in handbook
DK = don't know, neutral, not applicable, no opinion
NI = handbook would suffer with this topic

		important	don't know	not important
28.	Due process and hearing procedures	I	DK	NI
29.	Concept of least-restrictive environment	I	DK	NI
30.	Student eligibility for special education instruction and related services	I	DK	NI
31.	Serving the needs of students with multiple, severe, or profound handicaps	I	DK	NI
32.	Transfer students	I	DK	NI
33.	Developing the IEP documents	I	DK	NI
34.	Assessing students' vocational skills and potentials	I	DK	NI
35.	Assessing students' readiness for job training, placement, or graduation	I	DK	NI
36.	Job evaluation reports	I	DK	NI
37.	Prevocational training	I	DK	NI
38.	Record keeping and suggested forms	I	DK	NI
39.	Community resources providing direct services to students with special needs; ex: CETA, TEC, MHMR, etc.	I	DK	NI
40.	Agencies providing free materials, assistance, and information	I	DK	NI
41.	Sources of curriculum materials	I	DK	NI
42.	Professional organizations for the VAC	I	DK	NI
43.	Liability and insurance for VAC and student; ex: workmen's compensation, transporting students, etc.	I	DK	NI
44.	Survival kit of essential materials for the VAC	I	DK	NI
45.	Funding sources for special exemplary programs	I	DK	NI
46.	Funding sources for ongoing vocational special education teacher units from TEA	I	DK	NI
47.	Rural coops with several ISDs and the VAC program	I	DK	NI
48.	Urban, big-city, inner city features affecting the VAC program	I	DK	NI

I = topic should be in handbook
DK = don't know, neutral, not applicable, no opinion
NI = handbook would suffer with this topic

		important	don't know	not important
49.	Exemplary and innovative programs; ex: Project FIT, Project PRICE, SPIB, etc.	I	DK	NI
50.	Assessment of future trends affecting secondary vocational education of handicapped students . . .	I	DK	NI
51.	Cotton grading	I	DK	NI
52.	Other (please specify)_____	I	DK	NI
53.	Other (please specify)_____	I	DK	NI
54.	Other (please specify)_____	I	DK	NI

Five Most Important Topics

Please turn back and read over the tentative topics on the preceding two pages. Recalling the purposes of the VAC handbook, select the five most important topics for the new VAC who has just been assigned to a position and the five most important topics for the experienced VAC who has been in the field several years. Beginning with the most important, write the numbers corresponding to these topics in the spaces below.

RESPOND HERE:

New VAC	Most Important Topics:	Experienced VAC
_____	first	_____
_____	second	_____
_____	third	_____
_____	fourth	_____
_____	fifth	_____

NEW NAME

Some discussion has surfaced recently regarding a new name for the instructional program conducted by the VAC. The new name might more accurately communicate the nature of the program. In the spaces below, indicate your first and second choices. Feel free to suggest another alternative in the space provided.

_____Special Needs Program

_____Special Needs and Career Program

_____Secondary Special Needs Program

_____Special Vocational Needs Program

_____Special Needs Work-Study Program

_____Secondary Individual Needs Program

_____Other. Please specify: _____ _____

_____

DUTIES

To help us in developing the VAC handbook, please estimate the approximate percent of time spent on each task during any average month and enter it in the column at the right. Add other tasks as necessary. Do not be concerned about making the total exactly 100%. We will use ratios to make your numbers equivalent to a total 100%.

Duties	Percent (%) of time
Parent counseling	_____
Placing students for evaluation	_____
Refering students to other agencies	_____
Reviewing occupational and career information . . .	_____
Public relations and salesmanship	_____
Attending ARD, IEP, and other meetings	_____
Scheduling students	_____
Counseling students at school	_____
Counseling students on the job site or elsewhere .	_____

Transporting students . . . . . _____
Traveling between schools and job sites . . . . . _____
Receiving referals on special education students . _____
Required paperwork, reports, evaluations, forms, etc._____
Developing jobs with potential employers . . . . . _____
Administrative conferences, staff meetings,
inservice, etc. . . . . _____
Placing students on jobs . . . . . _____
Supervising students on jobs . . . . . _____
Pre-vocational classes . . . . . _____
Job follow-up data and services after graduation . _____
other (please specify)_____
_____ _____
other (please specify)_____
_____ _____
other (please specify)_____
_____ _____

MORE

In the space below or on the backs of these pages, please write any additional comments or questions which may help us develop the VAC handbook. Include problems, concerns, observations, questions, materials needed, materials available to share in the handbook. If you would like to help write a draft of any section, please make a note to that effect, and you will be contacted. Please send examples of forms or materials to

Tico Foley
Vocational Special Needs Program
College of Education
Texas A&M University
College Station, Texas 77843

APPENDIX C

Davison's Dissertation Abstract, Summary, and References:

Competencies Needed by Students Entering
Automobile Mechanics Programs in Texas Secondary Schools
With Emphasis on Achievement Expectations
for the Handicapped

For a discussion of the information in Appendix C see pages 5, 20.

COMPETENCIES NEEDED BY STUDENTS ENTERING AUTOMOBILE MECHANICS PROGRAMS IN TEXAS SECONDARY SCHOOLS WITH EMPHASIS ON ACHIEVEMENT EXPECTATIONS FOR THE HANDICAPPED

A Dissertation

by

JERRY PRESTON DAVIDSON

Submitted to the Graduate College of
Texas A&M University
in partial fulfillment of the requirement for the degree of

DOCTOR OF PHILOSOPHY

May 1979

Major Subject: Education (Vocational)

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ABSTRACT

Competencies Needed by Students Entering
Automobile Mechanics Programs in Texas Secondary Schools
With Emphasis on Achievement Expectations
for the Handicapped (May, 1979)

Jerry Preston Davidson, B. S., West Texas State University
M. Ed., Texas A&M University
Chairman of Advisory Committee: Dr. Don Herring

Purpose and Objectives

The purpose of this research was to identify those competencies needed by students entering Auto Mechanics programs which handicapped students either possess or could be expected to attain. To achieve this purpose, three objectives were established.

1. To identify the competencies needed by students entering Auto Mechanics classes.
2. To identify handicapping conditions which would usually prevent a student from possessing the identified competencies.
3. To determine what special assistance could be given handicapped students to enable them to meet the competencies.

Methodology

A panel of Auto Mechanics teachers who had shown excellence in their profession was chosen. Panel members were sent a list of 76 possible competencies needed by students entering Auto Mechanics programs, and were asked to rate each competency on a scale of 1 to 4; 1 = Unnecessary; 2 = Desirable; 3 = Valuable; 4 = Critical. This questionnaire was Round I of the survey.

The Round II questionnaire consisted of the same 76 competencies, and was also sent to the panel of Auto Mechanics teachers. On this form, the respondents were shown how each competency had been rated on Round I, and each teacher was reminded of his own response. The teachers were asked to rate each competency again in an effort to bring about concensus of the group. A mean score was calculated for each of the 76 competencies. It was decided that a mean rating of 2.5 or higher was sufficient for the competency to be retained for the third round; 48 competency statements received such a rating.

For the Round III questionnaire, each of the 48 competency statements were listed with six handicapping conditions. The conditions were: visually handicapped, aurally handicapped, educable mentally retarded, learning disabled, orthopedically handicapped, and emotionally disturbed. A panel of ten special education experts was asked to respond by noting whether or not a student with the indicated handicap would be likely to possess the competency. If not, they were asked to indicate if they felt the competency could be mastered with certain kinds of assistance. If so, they were asked to indicate the help they felt would be most beneficial. Five kinds of possible assistance were listed on the questionnaire for each competency.

Major Findings

Findings come from each of the panels of experts. The first major findings are related to objective one, and were derived from Rounds I and II.

1. Forty-eight competencies received a mean rating of 2.5 or higher, and were determined to be important for students entering Auto Mechanics.
2. Social maturity skills were the most important competencies for students entering Auto Mechanics classes.
3. The Auto Mechanics teachers indicated very little change of opinion between the two rounds of the survey.

Further findings, both of a general nature and specific nature, were disclosed by Round III, and are related to objectives two and three. The opinions stated by the panel of special education experts made possible these general findings:

1. Most of the competencies needed for beginning Auto Mechanics students were seen as already possessed by special needs students. Those that were not seen as possessed were usually considered to be attainable with some measure of extra assistance.
2. The comptency considered the most likely to remain out of reach for some of the handicapped students was the ability to drive an auto.
3. As far as sources of assistance are concerned, the help most commonly suggested was that of an aide in the classroom. This was followed respectively by individualized instruction, resource room assistance, modified Auto Mechanics curriculum, and counseling.

COMPETENCIES NEEDED BY STUDENTS ENTERING AUTOMOBILE MECHANICS PROGRAMS IN TEXAS SECONDARY SCHOOLS WITH EMPHASIS ON ACHIEVEMENT EXPECTATIONS FOR THE HANDICAPPED

A Summary Report of Research
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FOREWORD

With the advent of federal legislation mandating the placement of handicapped students into the "least restrictive environment" in public schools, many unanswered questions have been raised by vocational educators. Do handicapped students possess essential entry level competencies necessary for placement into regular vocational education programs? If handicapped students do not possess the necessary competencies, can they develop such competencies? Can handicapped students be accomodated effectively in regular vocational education programs? What special services will be necessary in order to teach handicapped students effectively? Answers to these and other questions are being sought in an effort to do the best possible job in meeting the needs of handicapped students.

This research study by Jerry P. Davidson was undertaken in an effort to provide partial answers to some of these questions. The study was limited to the area of automobile mechanics, but similar methodology could be used by researchers to study other vocational areas. The findings, conclusions, implications, and recommendations reported will be of interest to vocational teachers, administrators, special education personnel, curriculum specialists, teacher educators, guidance personnel, and State Education Agency personnel.

For additional information on the study, the reader may contact the Vocational Special Needs Project ENCOUNTER Staff, Interdisciplinary Education Program, College of Education, Texas A&M University, College Station, Texas, 77843.

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INTRODUCTION

Vocational education programs for the handicapped are not new in the United States. However, in the past few years there has been a tremendous increase in the national commitment toward expanding and improving the opportunities available for handicapped individuals.

The Rehabilitation Act of 1973 (Public Law 93-112) is the basic civil rights legislation for handicapped persons. Section 504 of this Act as amended (Public Law 93-516) specifically denies federal monies to any project or agency guilty of discrimination on the basis of handicap (Federal Register, Vol. 42, No. 86). This is important to educators, since most public schools receive some federal financial assistance.

The Educational Amendments of 1976 (Public Law 94-482) reflected a major change in the nation's social and economic awareness with a new impetus toward preparing all students for employment, and offered greater opportunities to handicapped students who had been excluded from some vocational programs (Federal Register, Vol. 42, No. 191).

In 1975, Congress passed an act directed toward insuring benefits and rights for all handicapped children and their parents. This was the Education for All Handicapped Children Act of 1975 (Public Law 94-142).

A portion of these regulations deals with the Individualized Education Program, or IEP. The IEP is a written statement for a

handicapped child which includes a statement of the specific special education and related services to be provided for the child, and the extent to which the child will be able to participate in regular educational programs (Federal Register, Vol. 42, No. 163).

Implementation of the new laws concerning handicapped students being placed into the existing framework of public education is the responsibility of the states, the schools, and inevitably, the individual teachers.

Vocational education has not always welcomed handicapped students. In 1968, the Texas Education Agency publication Guide for Public Schools in Planning Programs of Vocational Education for In-School Students made this recommendation to Vocational Industrial Education teachers:

> Selection of students: Admission must be restructed [sic] to those who are physically and mentally competent to do the work required in the program and who possess qualifications necessary for employment in the occupation for which the training is offered. As a rule, mentally or physically handicapped do not profit from the instruction and are a serious source of danger to themselves and other students in working with machines and tools. (p. 68)

The federal legislation which followed 1968 precluded any more such language, however, and by 1977, special education students could be taken into regular vocational programs through the recommendation of the Admission, Review, and Dismissal (ARD) Committee on the local school level. The ARD Committee is composed of at least six members. There are:

1. A representative of the vocational department. This could be the director, a supervisor, counselor, or a vocational teacher.

2. The vocational teacher who will instruct the handicapped student if the ARD Committee approves.
3. A member of the craft committee or vocational advisory committee.
4. An experienced special education teacher.
5. A counselor (non-vocational).
6. The principle or an assistant principal.

Even after the ARD Committee approves the placement of the special education student into the vocational classroom, there is a trial period of two weeks to see that the arrangement is satisfactory (Texas State Plan for Vocational Education, 1977).

This ARD procedure accepts the student at his or her level, and offers vocational and special education personnel the opportunity to arrive at a joint solution to the problem of placement of a special needs student into a vocational program.

There was a need to identify entry-level competencies which may be expected of handicapped students, so that members of ARD Committees can make intelligent, consistent decisions concerning admittance of these students into a vocational program. This information would also be useful in the development of the IEP for a student so admitted.

The primary beneficiaries of this study will be the handicapped students who desire to take Auto Mechanics. Competencies needed and competencies possessed can be compared, and those students who need upgrading or extra work on certain skills could begin as early as junior high to prepare themselves for Auto Mechanics. Those who

teach Auto Mechanics will have access to information to help them decide what possibilities for learning can be offered to handicapped students.

Special education personnel who work daily with the handicapped can also benefit from the study by receiving information concerning competencies needed by students entering Auto Mechanics, thus enabling them to develop guidelines for those with special needs. Special Education Directors who oversee the special needs requirements of an entire school district can plan ahead for certain students who desire to enroll in Auto Mechanics when they have reached the proper level.

OBJECTIVES

The purpose of this research was to identify those competencies needed by students entering Auto Mechanics programs which handicapped students either possess or could be expected to attain. To achieve this purpose, the following objectives were established.

1. To identify the competencies needed by students entering Auto Mechanics classes.
2. To identify handicapping conditions which would usually prevent a student from possessing the identified competencies.
3. To determine what special assistance could be given handicapped students to enable them to meet the competencies.

The need for such a study arose from recent Federal legislation concerning education for handicapped children. Public Law 94-142

speaks to the right of special needs students to be placed into the "least restrictive environment" (LRE), to receive a "free appropriate public education" (FAPE), and to have a personal plan of study known as an "individual education program" (IEP).

The IEP must be developed for every special needs student. There was a need to identify entry-level competencies which may be expected of handicapped students, so that members of the IEP committee could make intelligent, consistent decisions concerning admittance of these students into Auto Mechanics programs.

Students who desire to enroll in Auto Mechanics need to know what competencies will be expected of them. Auto Mechanics teachers need to know what to expect of students who are handicapped. Special education teachers need to know how to meet the needs of handicapped students enrolled in Auto Mechanics programs, and how to prepare younger students who will want to enroll in Auto Mechanics when they reach the eleventh grade. These needs were of utmost concern in the conduct of this study.

RESEARCH PROCEDURE

To determine what skills were needed by a special needs student entering Auto Mechanics, the study was divided into two parts. First, competencies needed by any student entering Auto Mechanics were identified. A panel of 12 outstanding Auto Mechanics teachers was selected. Each was mailed the Round I questionnaire containing a list of 76 possible competencies needed by a student entering Auto Mechanics. These 76 competencies were derived from a review of the literature

and from the survey instruments developed in associated research projects (Parrish, 1978; Swinney, 1978).

The competencies were divided into four areas: Verbal Skills, Computational Skills, Social Maturity Skills, and Specialized Skills. The teachers were asked to rate each competency on a scale of 1 to 4, as follows: 1 = Unnecessary; 2 = Desirable; 3 = Valuable; and 4 = Critical. The respondents were asked to provide a reason for each rating, and space was provided for them to add competencies which they felt may have been omitted.

The Round II questionnaire was sent to the same panel, and incorporated the ratings from Round I. The teachers were asked to again rate the 76 competencies, but this time each was shown how he rated the items in relation to how the others had rated them on Round I. This was done in an effort to bring about consensus of opinion concerning the rating of the competencies. This technique was a modification of the Delphi technique (Delbecq, Van de Ven, and Gustafson, 1975).

When the Round II questionnaires were returned, the ratings given each competency were averaged. A mean rating of 2.5 was used as the cut-off point for deciding whether or not a competency was to be retained for use on Round III. On the 1 to 4 rating scale, 2.5 was the median, mid-way between "Desirable" and "Valuable".

Forty-eight competencies received a mean rating of 2.5 or higher. These were determined to be the competencies needed by students entering Auto Mechanics, thus accomplishing the first objective of the study.

To accomplish objectives 2 and 3, a panel of special education experts was chosen. As was the case with the Auto Mechanics teachers, these educators were chosen with the aid of Texas Education Agency personnel. For Round III of the survey, these educators were provided the list of 48 Auto Mechanics competencies, and were asked to consider each in the light of six handicapping conditions: Visually Handicapped (VH), Aurally Handicapped (AH), Educable Mentally Retarded (EMR), Learning Disabled (LD), Orthopedically Handicapped (OH), and Emotionally Disturbed (ED).

The teachers were to make three decisions for each competency/handicapping condition combination:

1. Could a student with such a handicap be expected to meet the competency at the time of entry into Auto Mechanics?
2. If not, could the student meet the competency with special assistance, either before or after entry into Auto Mechanics?
3. If so, what kind of assistance would be the most appropriate?

There were five kinds of assistance to students listed on the instrument. There were:

1. Resource room assistance, either before or after enrollment into Auto Mechanics.
2. Individualized instruction, either before or after entry into Auto Mechanics.
3. Counseling

4. Modified Auto Mechanics curriculum to fit the special needs of the student.
5. An aide in the Auto Mechanics classroom for assistance to the teacher.

The information from Round III identified handicapping conditions which would usually prevent a student from possessing the entry-level Auto Mechanics competencies, and determined what special assistance could be given to handicapped students to enable them to meet the competencies.

ROUND I AND ROUND II DATA

The twelve Auto Mechanics teachers who served as the panel of experts rated the 76 competencies in two rounds. The second instrument reminded them of how they had responded on the first, and showed how the competencies were rated by the other teachers. The purpose of this tactic was to attempt to bring concensus to the group.

The mean scores for the competencies were calculated. Because the rating scale ran from 1 to 4, any competencies which did not rate at least 2.5 on the second round were not considered as being essential for entry into Auto Mechanics, and thus were dropped from the third instrument which was sent to the special education experts. The 76 competencies are shown in Tables 1-5, along with mean ratings from each of the first two rounds.

Table 1 deals with the verbal skills needed by students entering Auto Mechanics. This section contains the only perfect 4.0 ratings of the entire survey. The Auto Mechanics teachers apparently believed the

TABLE 1

ROUND I AND ROUND II COMPETENCY RATINGS
MEAN SCORES AND CHANGES
VERBAL SKILLS

Competency	Round I	Round II	Change
A. A student entering Auto Mechanics must be able to read in order to comprehend:			
1. high school textbooks	3.2	3.3	+.1
2. written instructions	3.5	3.6	+.1
3. work orders	3.1	2.9	-.2
4. examinations	3.3	3.7	+.4
5. repair manuals	3.5	3.4	-.1
B. A student entering Auto Mechanics must be able to spell and write well enough to compose:			
6. work orders	2.8	2.7	-.1
7. examination answers	3.4	3.4	± 0
8. personal letters	1.8	1.7	-.1
9. business letters	1.8	1.7	-.1
10. themes or reports	1.8	2.0	+.2
C. A student entering Auto Mechanics must be able to:			
11. listen attentively	3.7	3.8	+.1
12. follow orders when given orally	3.9	4.0[a]	+.1
13. communicate easily with others	3.2	2.9	-.3
14. use a telephone	2.0	1.9	-.1
Verbal Skills Grand Mean	2.9	2.9	± 0

[a]The only competency to score 4.0 on the survey.

ability to follow instruction given orally to be a highly essential competency for entry level students. Four of the competencies did not make the 2.5 rating necessary for inclusion on the third round. Writing letters, themes, or reports were not seen as being highly important in Auto Mechanics class. Some of the teachers indicated that student use of the telephone was prohibited in their classes, while others noted that students were allowed to call out to order parts and tools. In any case, the use of the telephone was not a competency perceived as needed by all students entering Auto Mechanics.

As far as the computational skills were concerned, as seen in Table 2, there were mixed feelings about their importance to entering students. The very basic math functions were considered important, and all were retained for the third round of the survey. The rating of the competency of "adding" dropped mysteriously almost a full point between the two rounds. This was the largest change in means on the entire survey. The teachers did not consider the ability to use a calculator necessary for beginning Auto Mechanics students.

Despite the imminent change to the metric system, the teachers downplayed the importance of familiarity with that system of measuring. None of the competencies dealing with measuring in metric units made the 2.5 cut-off necessary for inclusion in the third round. There was a feeling expressed by some that metric tools, metric volumes, and so forth were useful only for foreign autos, and apparently not many foreign autos were being repaired in the Auto Mechanics laboratories.

Money management skills were also not considered highly important

TABLE 2

ROUND I AND ROUND II COMPETENCY RATINGS
MEAN SCORES AND CHANGES
COMPUTATIONAL SKILLS

Competency	Round I	Round II	Change
A. A student entering Auto Mechanics must be able to perform with accuracy these basic math skills:			
1. counting	3.5	3.5	± 0
2. adding	3.7	2.8	-.9[b]
3. subtracting	3.5	3.5	-.1
4. multiplying	2.8	3.3	+.5
5. dividing	2.8	3.4	+.6
6. using decimals	3.2	3.2	± 0
7. using fractions	3.2	3.0	-.2
8. using percentages	2.8	2.8	± 0
9. using a calculator	1.4	1.3	-.1
B. A student entering Auto Mechanics must possess the following measuring skills:			
1. linear-English system	3.2	3.2	± 0
2. linear-metric system	2.3	2.0	-.3
3. volume-English system	2.7	2.6	-.1
4. volume-metric system	2.1	1.9	-.2
5. temperature-English system	2.9	2.9	-.1
6. temperature-metric system	2.3	1.9	-.4

TABLE 2 (continued)

Competency	Round I	Round II	Change
C. A student entering Auto Mechanics must possess the following money management skills:			
1. counting	2.8	2.8	± 0
2. making change	2.3	2.0	-.3
3. computing sales tax	2.3	2.0	-.3
4. charging purchases	1.9	1.7	-.2
5. bookkeeping	1.9	1.8	-.1
D. A student entering Auto Mechanics must be able to read and interpret:			
1. graphs	2.0	1.7	-.3
2. charts	2.2	2.0	-.2
3. dials/gauges	2.8	2.1	-.7
4. scale drawings	2.0	1.9	-.1
5. maps	1.6	1.6	± 0
Computational Skills Grand Mean	2.6	2.4	-.2

[b]Largest change in mean score between the two rounds.

for entering students. Many teachers explained that students were not allowed to handle money in class. Only the competency of "counting money" was ranked high enough to be included on Round III.

Entering students were also not expected to know how to read charts, graphs, maps, scale drawings, or the like. Based on reasons given by teachers for these ratings, it was not that they considered

these skills unimportant, but rather that students would be taught the correct way to use these things after entering the program.

As shown in Table 3, social maturity skills were rated the highest of any area as far as competencies needed for entering students. The teachers seemed to feel that any student who would make an effort to learn could be taught.

In this respect, the Auto Mechanics teachers are not alone. All teachers would love to have the students who are well-behaved, want to learn, and come to class every day. What is significant, perhaps, is that fact that so many of these social competencies were rated as high as they were. A full one-third of them were rated 3.5 or higher, meaning the teachers considered them critical. Showing concern for safety was highest with a rating of 3.9. Those skills dealing with shop practices were often rated higher than those which dealt with interpersonal relationships. Of the entire list of 21 social skills, only "plan work effectively" was not rated high enough to be included on Round III. There seemed to be a feeling among the teachers that work for the students in class would be pre-planned.

As can be seen in Table 4 (page 15), it was apparently the belief of the teachers that most skills which deal with Auto Mechanics could be taught in the classroom and shop. On this portion of the instrument, only those skills which are not normally taught, such as "distinguish colors" and "distinguish shapes and forms" were rated as important competencies for students entering Auto Mechanics. The illogical responses of two items in this section should be noted. The teachers thought it

TABLE 3

ROUND I AND ROUND II COMPETENCY RATINGS
MEAN SCORES AND CHANGES
SOCIAL MATURITY SKILLS

Competency	Round I	Round II	Change
A. A student entering Auto Mechanics must be able to:			
1. work well in a group	3.5	3.4	-.1
2. work independently	3.3	3.1	-.2
3. follow through on a task	3.5	3.5	± 0
4. be responsible for equipment	3.3	3.3	± 0
5. show concern for safety	3.8	3.9	+.1
6. take pride in work	3.4	3.5	+.1
7. show initiative to learn	3.5	3.8	+.3
8. know and exhibit proper behavior	3.4	3.4	± 0
9. have a neat personal appearance	3.0	3.0	± 0
10. attend class regularly	3.9	3.9	± 0
11. recognize and respect authority	3.2	3.2	± 0
12. adapt to change	2.8	2.8	± 0
13. realize the value of time	2.8	2.6	-.2
14. plan work effectively	2.5	2.3	-.2
15. benefit from the course	3.7	3.4	-.3
16. be punctual	3.7	3.8	+.1
17. display a wholesome relationship with parents and other adults	3.0	2.8	-.2
18. display consideration for others	2.9	2.8	-.1
19. exercise good personal hygiene	3.2	3.2	± 0
20. exercise self-discipline	3.2	3.1	-.1
21. learn from mistakes	3.5	3.5	± 0
Social Skills Grand Mean	3.3	3.3	± 0

TABLE 4

ROUND I AND ROUND II COMPETENCY RATINGS
MEAN SCORES AND CHANGES
SPECIALIZED SKILLS

Competency	Round I	Round II	Change
A. A student entering Auto Mechanics must be able to:			
1. recognize common hand tools	2.7	2.5	-.2
2. use common hand tools	2.1	2.0	-.1
3. left heavy objects	2.3	2.2	-.1
4. drive an auto	3.1	3.1	± 0
5. work in close quarters	2.8	2.6	-.2
6. check fluid levels in an auto	1.8	1.6	-.2
7. operate equipment with hand/ foot controls	2.3	2.2	-.1
8. change a tire	1.7	1.3	-.4
9. distinguish colors	3.1	3.3	+.2
10. distinguish shapes and forms	3.1	3.4	+.3
11. distinguish odors	2.7	2.5	-.2
12. judge distances	2.8	2.4	-.4
13. start a car with jumper cables	1.8	1.6	-.2
14. open the hood of a car	2.0	1.9	-.1
15. diagnose problems	2.2	1.6	-.6
16. start a car with an ignition key	2.7	2.3	-.4
Specialized Skills Grand Mean	2.5	2.3	-.2

valuable for students to enter the class with the ability to drive (3.1 rating), but not so important to be able to start a car with an ignition key (2.3 rating).

Summary of Findings: Round I and Round II

Most of the changes in mean scores between the two rounds were small, with only nine changes greater than .4 of a point. Only three changes were made which eliminated competencies from inclusion in Round III. There were 18 comptencies which showed no change in mean between the two rounds. There were 14 which changed positively (average change = +.2) and 44 changed in a negative direction (average change = -.2).

The grand means from Round II of each of the four areas of competency are summarized below in Table 5.

TABLE 5

GRAND MEANS OF THE FOUR COMPETENCY AREAS
ROUND II

Competency Area	Grand Means
Verbal skills	2.9
Computational skills	2.4
Social maturity skills	3.3
Specialized skills	2.3

The social maturity skills rated highest, by almost a half-point over the second area, verbal skills, and a full rating point above the

other two areas. This heavy emphasis on social development weighted Round III in favor of these comptencies, as 20 of the eventual 48 itmes on that round were social competencies.

Round I and Round II of the survey achieved the first objective of the research, that of identifying competencies needed by students entering Auto Mechanics programs. The 12 Auto Mechanics teachers who participated in this study were determining competencies needed by all students, regular and students with special needs. The information gained by this portion of the research is intended to be used by everyone interested in entry level Auto Mechanics skills.

Round III Data

The original 76 competencies of the first two rounds were reduced to 48 for Round III by including only those competencies which received a rating of 2.5 or higher on Round II. For this portion of the study, ten special needs educators which had been identified as a panel of experts were asked to evaluate each competency in respect to six handicapping conditions, and reply as to whether or not each handicapping condition would or would not prohibit a student from either having or acquiring that competency. Specifically, each was asked to answer three questions. First, would a student with the handicap be likely to possess the competency coming into the Auto Mechanics class? If not, could that student attain the competency with proper assistance? If so, which type(s) of assistance would be the most beneficial to the student in acquiring the competency?

Replies of only nine special education experts were reported because the instrument completed by one of them was unusable.

For clarity, each of the six handicapping conditions was considered separately in the display of data in this study. In this way, a person who has in mind a student with a specific handicap would be able to concentrate on just that portion of the data which is the most pertinent.

Table 6 shows the actual number of the nine panel members who indicated a competency could not be met by a student with a specified handicap. Table 7 indicates the total number of times, from Round III, the panel indicated a specific type of assistance would be helpful to a student with a handicap.

TABLE 6

SUMMARY OF ROUND III
NUMBER OF TEACHERS WHO INDICATED
A COMPETENCY CANNOT BE MET

(N=9)

Competency	Handicapping Condition VH	AH	EMR	LD	OI	ED
A. Verbal Competencies						
A student entering Auto Mechanics must be able to read in order to comprehend:						
1. high school level textbooks	2		1			
2. written instructions	1					
3. work orders	1					
4. examinations	1					
5. repair manuals	1					
A student entering Auto Mechanics must be able to spell and write well enough to compose:						
6. work orders	1					
7. examination answers			2			
A student entering Auto Mechanics must be able to:						
8. listen attentively						
9. follow directions when given orally						
10. communicate easily with others						

TABLE 6 (continued)

Competency	Handicapping Condition VH	AH	EMR	LD	OI	ED
B. Computational Competencies A student entering Auto Mechanics must be able to perform with accuracy these basic math skills:						
1. counting						
2. adding						
3. subtracting						
4. multiplying						
5. dividing						
6. using decimals			1			
7. using fractions						
8. using percentages			3			
9. measuring in inches and feet						
10. measuring in pints, quarts, and gallons						
11. measuring in degree Fahrenheit						
12. counting money						
C. Social Competencies A student entering Auto Mechanics must be able to:						
1. work well in a group						1
2. work independently						

TABLE 6 (continued)

Competency	Handicapping Condition VH	AH	EMR	LD	OI	ED
3. follow through on a task						
4. be responsible for equipment						
5. show concern for safety						
6. take pride in work						
7. show initiative to learn						
8. know and exhibit proper behavior						
9. have a neat personal appearance						
10. attend class regularly						
11. recognize and respect authority						
12. adapt to change						
13. realize the value of time						
14. benefit from the course						
15. know value of being punctual						
16. display wholesome relationship with parents and other adults						
17. display consideration for others						

TABLE 6 (continued)

Competency	Handicapping Condition VH	AH	EMR	LD	OI	ED
18. exercise good personal hygiene						
19. exercise self-discipline						
20. learn from mistakes						
D. Specialized Competencies A student entering Auto Mechanics must be able to:						
1. recognize common hand tools						
2. drive an auto	4	1	2	1	2	1
3. work in close quarters						
4. distinguish colors	2					
5. distinguish shapes and forms						
6. distinguish odors						

TABLE 7

TOTAL SUGGESTED ASSISTANCE
FOR ALL HANDICAPPING CONDITIONS

Type of Assistance	Total Number of Times Suggested for Each Handicapping Condition VH	AH	EMR	LD	OI	ED	Total
resource room assistance	10	2	71	40	1	17	141
individualized instruction	22	8	77	16	6	24	147
counseling	0	0	16	8	1	55	80
modified Auto Mechanics curriculum	40	15	59	9	4	5	132
aide in the Auto Mechanics classroom	16	20	92	46	5	71	250
Total	88	45	315	89	17	172	

Findings Related to Objective One

Objective One of the study dealt with the identification of competencies needed by any student entering Auto Mechanics. These findings reflect the opinions of the panel of Auto Mechanics teachers concerning those competencies.

1. Forty-eight competencies received a mean rating of 2.5 or higher, and were determined to be important for students entering Auto Mechanics.
2. Social maturity skills were the most important competencies for students entering Auto Mechanics classes. The grand mean for each of the competency areas, as derived from Round II, were: Social Maturity, 3.3; Verbal, 2.9; Computational, 2.4; and Specialized, 2.3.
3. The teachers indicated very little change of opinion between the first two rounds of the survey. Only three additional competencies fell below the 2.5 mean rating after the Round II questionnaire.

Findings Related to Objectives Two and Three

Objectives two and three dealt with the identification of handicapping ocnditions which would prevent a student from possessing the competencies identified by the first two rounds of the survey, and the determination of the types of special assistance which would help overcome those handicaps. These findings are based on the responses of the panel of special education experts on Round III.

1. Most of the competencies needed for beginning Auto Mechanics students were viewed by the panel of special education teachers as already possessed by the special needs students. Those that were not seen as possessed were considered to be attainable with some measure of extra assistance.
2. The competency considered the most likely to remain out of reach for some of the handicapped students was the ability to drive a car. It was the only one in which the panel evidenced a tendency to show a "cannot meet or attain" opinion across all six handicapping conditions.
3. As far as assistance sources to handicapped students, the help most commonly suggested was that of an aide in the classroom. This was followed respectively by individualized instruction, resource room assistance, modified Auto Mechanics curriculum, and counseling.
4. Visually handicapped students would encounter the most difficulty in reading and writing skills, and in driving a car. The best resource for assistance would be a modified Auto Mechanics curriculum.
5. Aurally handicapped students should have little or no trouble in meeting most competencies for admission into Auto Mechanics. In instances where help was needed, an aide in the classroom was suggested most often.
6. Educable mentally retarded students may have some difficulty with the competencies dealing with reading, writing, and

driving. An aide in the classroom was most often suggested as help for these students.

7. Learning disabled students should have few problems in meeting the competencies. An aide in the classroom was noted as the most likely channel of assistance for these students.
8. Students with orthopedical handicaps should function as well as all other students in Auto Mechanics, except for those instances which call for specific physical activity. Individual instruction would be of the most assistance in these cases.
9. Verbal skills for emotionally disturbed students may vary substantially, as may computational skills. Social maturity skills are obtainable, if counseling is provided. An aide in the classroom would also help these students.

Conclusions

From the findings of the three rounds, these conclusions were drawn:

1. The most needed competencies for beginning Auto Mechanics students were social maturity skills.
2. Specialized Auto Mechanics skills were the least important for entering students.
3. The 48 competencies derived from Round I and Round II are important to all entering Auto Mechanics students, not just handicapped students.
4. The opinion of Auto Mechanics teachers regarding the importance of competencies for entering students was influenced only

minimally by the use of two suvey rounds in an attempt to reach concensus.

5. No competencies were viewed as unattainable for handicapped students, even though specialized assistance for these students was suggested in many cases.
6. An aide in the classroom would be a major source of assistance to an Auto Mechanics teacher with one or more special needs students in his class, and other means of assistance would be important at times.

Implications

From the conclusions, the following implications can be deduced concerning the data gathered:

1. Because of the importance Auto Mechanics teachers place in social maturity skills, there should be more emphasis placed on these skills in the educational process. There is apparent justification of teaching citizenship, behavior, and courtesy as part of the school curriculum.
2. Auto Mechanics teachers expect entering students to have social maturity. Most other skills, however, can be developed in students through class and shop instruction.
3. Some special needs students, while able to attain the competencies needed for entering Auto Mechanics, may require extra help and assistance in fully meeting these competencies. The best help would be an aide in the classroom, but there are assistances such as individualized instruction, resource rooms,

and counseling which can help the student acquire the competencies.

Recommendations

As a result of conducting this study, several recommendations are made which would enable this material to gain greater usefulness.

1. The information gathered by this study should be made available to every school district in Texas. It is important for public school personnel to note that the findings tend to maximize the importance of social maturity skills, and minimize the differences between handicapped and non-handicapped students.
2. As far as teaching methods, Auto Mechanics teachers need to become familiar with techniques they can use in the classroom and shop. Special training should also be given to special education teachers to make them aware of the competencies needed by all Auto Mechanics students.
3. Students who are not eligible for Auto Mechanics because they are not in the 11th or 12th grade, and desire to enter the course when they reach that level should become familiar with the 48 competencies derived herein and prepare themselves accordingly. Counselors and special education teachers should assist these students when necessary.
4. More money should be alloted to the local school districts to help defray the costs of hiring special classroom aides.

5. The competencies derived by this study should be validated by further research.
6. A study should be conducted to ascertain the present ability of schools to teach handicapped students in Auto Mechanics. Attitudes, barriers, equipment and facilities, and other factors need to be explored before some of the recommendations of this study can be carried to their logical conclusion.
7. This study and the companion studies dealt only with Auto Mechanics, Vocational Agriculture I and Homemaking I. Other vocational areas should be studied for entry-level competencies.
8. Follow-up studies should be made of handicapped students who are products of regular Auto Mechanics programs.

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APPENDIX D

Parrish's Dissertations Abstract, Selected Tables, and References:

Identification of Prerequisite Competencies Needed
By Handicapped Students for Successful Entry
Into a Vocational Agriculture Program

For a discussion of the information in Appendix D see pages 5, 20.

IDENTIFICATION OF PREREQUISITE COMPETENCIES NEEDED BY HANDICAPPED STUDENTS FOR SUCCESSFUL ENTRY INTO A VOCATIONAL AGRICULTURE PROGRAM

A Dissertation

by

LINDA HUDSON PARRISH

Submitted to the Graduate College of
Texas A&M University
in partial fulfillment of the requirement for the degree of

DOCTOR OF PHILOSOPHY

August, 1978

Major Subject: Education (Vocational)

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ABSTRACT

Identification of Prerequisite Competencies Needed
By Handicapped Students For Successful Entry Into
A Vocational Agriculture Program. (August, 1978)
Linda Hudson Parrish, B. S., Abilene Christian College
M. S., Indiana University
Chairman of Advisory Committee: Dr. Donald L. Clark

Accessibility to vocational programs, such as Production Agriculture I, is an essential element in the preparation of handicapped individuals for productive lives. It is upon this premise that this study is based.

Purpose

The dual purpose of this research was to identify the competencies needed by students to successfully enter Production Agriculture I and to determine if these competencies could be attained by students with certain handicapping conditions. The handicapping conditions considered for use in this study were: a) educable mentally retarded, b) specific learning disabled, c) orthopedically impaired, and d) seriously emotionally disturbed.

Procedure

The Delphi technique was identified as the method to be used to determine the competencies that were considered prerequisite for successful entry into Production Agriculture I.

Following the guidelines that accompany this method, an advisory committee was established to assist the investigator with decisions throughout the study. Through a nominating procedure, utilizing the area supervisors in agricultural education at the Texas Education Agency, ten exemplary Production Agriculture I teachers were selected. This panel included a cross section of membership representing ten geographical agricultural areas in the State of Texas. With the assistance of the panel of experts, the advisory committee, and an extensive review of the Production Agriculture I curriculum, Round I of the Delphi study was completed and administered. Respondents were asked to respond as to how frequently each competency was used within Production Agriculture I classes and to give examples of that use.

In Round II, the agricultural panel of experts was presented a summary of their responses from Round I and was asked to reconsider their initial responses in relation to the responses of the other members of the panel. They were also requested to rate each competency as to importance, as well as frequency of use. Analysis of the responses from Round II provided the taxonomy of prerequisite competencies needed for successful entry into Production Agriculture I.

The second component of the study required an additional panel of experts from the field of special education. A similar nomination process occurred utilizing consultants at the Texas Education Agency in special education. The ten special education teachers chosen as members of the panel of experts were requested to respond to the competencies cited by the Production Agriculture I experts, determining if students who are handicapped as a result of the four conditions previously cited could be expected to achieve these prerequisites. They were also asked to identify special services taht could aid handicapped students in achieving these competencies.

Major Findings

Based on the results of an extensive curriculum investigation, a review of the literature, responses from two panels of experts and input from an advisory committee, the following conclusions can be drawn:

1. There is a need for the identification of prerequisite skills for entry into Production Agriculture I classes.
2. Basic academic competence is preferred for entry into Production Agriculture I, rather than highly specialized skills.
3. Social maturity skills are considered the most important for successful entry into Production Agriculture I.
4. Competencies identified as those requiring special considerations, such as physical manipulatory tasks, were not considered as essential as basic social and academic competence.
5. Reading materials that are most often used in Production Agriculture I classes are consistently above the ninth grade reading level.
6. Students considered handicapped because of educable mental retardation, specific learning disability, orthopedic impairment, or serious emotional disturbance can be expected to achieve many of the prerequisite skills cited by the agricultural teachers prior to entry into Production Agricultural I.
7. There is a need for special services to assist the handicapped student in acquiring the prerequisite competencies cited in this study.

Table 7

Number and Type of Examinations Administered in Production Agriculture I

Type	$\bar{x}$	Range
Oral Examinations	5.3	0-30
Objective Examinations	13.5	5-25
Essay Examinations	6.8	0-25

Table 8

Readability Levels of Selected Materials
Used In Production Agriculture I

Title	No. of pages	Readability grade level
Official FFA Manual for 1977	128	16.0
Parliamentary Guide for FFA*	39	13.2
Progressive Farmer Magazine (Feb. 1978 issue)	218	9.1
Stockman's Handbook**	957	13.9

*Gray, J. D., 1964
**Ensminger, M. E., 1970

Table 9

Services Aiding Handicapped Students

Condition	Aide in Regular Classroom	Resource Room Assistance	Modified equipment and/or curriculum
EMR	270	268	234
SLD	255	217	172
OI	233	157	221
SED	266	202	179

Table 10

Taxonomy of Competencies and Expected Attainment
By Students With Specific Handicapping Conditions

COMPETENCY	80% of Special Education Experts Anticipating Competency Attainment By Handicapped Students			
	EMR	SLD	OI	SED
READING				
Textbooks		x	x	x
Written directions	x	x	x	x
Examinations		x	x	x
Reports		x	x	x
Rote Memorization			x	
COMPUTATION				
Count	x	x	x	x
Add	x	x	x	x
Subtract	x	x	x	x
Multiply	x	x	x	x
Divide		x	x	x
Place decimals		x	x	x
Work fractions			x	x
Calculate percent			x	x
Operate adding machine	x	x	x	x
Linear measurement	x	x	x	x
Dry measurement	x	x	x	x
Time measurement	x	x	x	x
Count money	x	x	x	x
Make change	x	x	x	x
Keep books	x	x	x	x
SOCIAL MATURITY				
Adapt to change	x	x	x	x
Attend class regularly	x	x	x	x
Be responsible for equipment	x	x	x	x
Follow through on task until completed	x	x	x	x
Have a neat personal appearance	x	x	x	x
Know and exhibit appropriate behavior	x	x	x	x
Show concern for safety	x	x	x	x
Show initiative to learn	x	x	x	x
Show positive attitudes toward authority	x	x	x	x

Table 10 continued

COMPETENCY	80% of Special Education Experts Anticipating Competency Attainment By Handicapped Students			
	EMR	SLD	OI	SED
Take pride in work	x	x	x	x
Work independently	x	x	x	x
Work well in a group	x	x	x	x
Be punctual	x	x	x	x
Communicate effectively with others	x	x	x	x
Display wholesome relationships	x	x	x	x
Display consideration for others	x	x	x	x
Exercise good personal hygiene	x	x	x	x
Exercise self-discipline	x	x	x	x
Exercise sound judgment	x	x	x	x
Have a desire to please	x	x	x	x
Have regard for fellow students	x	x	x	x
Learn from mistakes	x	x	x	x
Learn from winning and losing	x	x	x	x
Show a willingness to excel	x	x	x	x
Use proper table etiquette	x	x	x	x
SPECIAL CONSIDERATIONS				
Manipulate hand tools	x	x	x	x
Maneuver around obstacles/ close quarters	x	x	x	x
Distinguish colors	x	x	x	x
Shapes and forms	x	x	x	x
Distances	x	x	x	x
Odors	x	x	x	x
Listen attentively	x	x	x	x
Follow oral directions	x	x	x	x

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APPENDIX E

Swinney's Dissertation Abstract, Selected Tables, and References:

Identification of Prerequisite Skills Needed by
Handicapped Students Entering Vocational Homemaking

For a discussion of the information in Appendix E see pages 5, 20.

IDENTIFICATION OF PREREQUISITE SKILLS NEEDED BY HANDICAPPED STUDENTS ENTERING VOCATIONAL HOMEMAKING

A Dissertation

by

SANDRA NEESE SWINNEY

Submitted to the Graduate College of
Texas A&M University
in partial fulfillment of the requirement for the degree of

DOCTOR OF PHILOSOPHY

August 1978

Major Subject: Education (Vocational)

137

ABSTRACT

Identification of Prerequisite Skills Needed by
Handicapped Students Entering Vocational Homemaking (August 1978)
Sandra Neese Swinney, B. S., University of Arizona;
M. S., Oklahoma State University
Chairman of Advisory Committee: Dr. John R. Hoyle

Objectives

The objectives of this study were to identify the entry level skills that a panel of experts considered prerequisite for students entering a program in homemaking and to determine the extent to which practitioners in the fiels of special education and home economics expect handicapped students to possess the entry level skills. To accomplish the objectives of the study, four research questions were used as guidelines for conducting the research:

1. What are the skills necessary for successful entry into homemaking as determined by practicing homemaking teachers?
2. Are there any differences between responses of special education practitioners and home economics teachers when asked whether handicapped students would possess the entry level skills?
3. What is the extent to which special education and home economics teachers expect handicapped students to possess the entry level skills?
4. What do special education and home economics teachers suggest as support services to help handicapped students obtain the missing entry level skills?

Procedure

The first objective of the study was achieved through two rounds of a Delphi study. The items on the survey were judged according to usage and importance in the homemaking classroom. Items that were judged to be used moderately and considerably by a panel of experts were retained for use in a third round. The tasks were distributed in four categories and included reading skills, computational skills, social maturity skills, and special considerations (psychomotor and perceptual skills).

The second objective of the study was achieved through a third round of the Delphi survey. The respondents were special education practitioners and home economics teachers who were currently in a school setting. These respondents examined the skills in relation to whether handicapped students would or would not possess them upon entry into homemaking.

Major Findings

There were differences in the responses of the special education and home economics practitioners in 4% of the entry level skills. 96% of the responses were essentially in agreement.

The extent to which both groups expected handicapped students to possess the entry level skills varied from category to category.

1. Reading skills would probably not be possessed by students who were mentally retarded, had a specific learning disability, or who were visually handicapped.
2. Computational skills might not be possessed by mentally retarded students and those with a specific learning disability.
3. Social maturity skills would probably not be possessed by students who were mentally retarded and seriously emotionally disturbed.
4. Special considerations (psychomotor and perceptual skills) would be difficult for students who were visually handicapped.

The suggestions for support to provide the missing entry level skills to students with certain handicapping conditions included:

1. Mentally retarded students will benefit from a modified curriculum to obtain reading and computational skills and participation in a Special Education resource room to develop social maturity skills.
2. Students with a specific learning disability will profit from help received from a teacher's aide in the regular classroom to acquire reading skills and participation in a Special Education resource room to develop computational skills.
3. Students who are seriously emotionally disturbed will develop social maturity skills through participation in a Special Education resource room, with the help of a teacher's aide in the regular classroom, and from counseling services.
4. Visually handicapped students will improve reading skills, psychomotor and perceptual skills through modified curriculum and/or equipment, help received from a teacher's aide in the regular classroom, and other support services in the form of large print, Braille, or tape recorded materials.

Table 3

Summary of the Category READING SKILLS for Rounds I and II

N=10

I. FIRST ROUND RESPONSE 4.0 = Considerable Use	II. ENTRY LEVEL SKILL	III. SECOND ROUND* RESPONSE 4.0 = Considerable Use	IV. IMPORTANCE 3.0 = Essential
	READING SKILLS		
	IA. A student entering Homemaking I must be able to read in order to comprehend:		
3.6	(1) TEXTBOOKS (as needed for reading assignments in Teen Guide to Homemaking)	3.6	2.6
2.5	(Omit) TECHNICAL INFORMATION (as needed in nutrition and clothing construction)	2.6	2.0
3.8	(2) WRITTEN DIRECTIONS (as needed in recipes, tests, and extended learning experiences)	3.9	2.4
3.5	(3) EXAMINATIONS (as needed for unit tests and quarter quizzes)	3.4	2.4
	(omit) NEWSPAPER OR MAGAZINE ARTICLES	2.7	2.1
	(4) WORKSHEETS	3.4	2.4
	(5) HANDOUTS	3.4	2.4
	IB. A student entering Homemaking I must be able to spell words in order to write:		
3.5	(6) TERMS (as needed for clothing construction and food preparation)	3.4	2.4
3.4	(7) LABELS (as needed in consumer information such as fabric care or food packaging)	3.1	2.3
	(omit) REPORTS (as needed to summarize research and extended learning experiences)	2.8	2.2
3.4	(8) DEFINITIONS (as needed in nutrition, food preparation, and clothing)	3.5	2.4
2.9	(9) ESSAY EXAM ANSWERS (as need in quarter tests and unit quizzes)	3.0	2.3
2.8	IC. (omit) A student entering Homemaking I must be able to memorize by rote (e.g., measurement equivalents, abbreviations and symbols)	2.4	2.3

*Numbered items (means of 3.0 or more) were included in Round III.
(Omit) items (means of 2.9 or less) were not included in Round III.

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Table 4

Summary of the Category COMPUTATIONAL SKILLS for Rounds I and II

N=10

I. FIRST ROUND RESPONSE 4.0 = Considerable Use	II. ENTRY LEVEL SKILL	III. SECOND ROUND* RESPONSE 4.0 = Considerable Use	IV. IMPORTANCE 3.0 = Essential
	COMPUTATIONAL SKILLS IIA. A student entering Homemaking I must be able to apply basic math skills in order to:		
3.2	(10) COUNT (as needed for determining numbers of pieces of equipment, calories, pattern pieces)	3.3	2.4
3.7	(11) ADD (as needed in figuring grocery orders, pattern alterations, nutritive values)	3.6	2.5
3.6	(12) SUBTRACT (as needed in pattern alterations and budgets)	3.5	2.4
3.5	(13) MULTIPLY (as needed for increasing a recipe or computing calorie needs)	3.4	2.4
3.3	(14) DIVIDE (as needed for reducing recipes, unit pricing, averaging nutrients)	3.4	2.4
2.9	(15) USE DECIMALS (as needed for counting/adding money, computing price of food for comparison)	3.2	2.4
3.5	(16) USE FRACTIONS (as needed in measuring yardage, seam allowances, recipe ingredients, pattern alterations)	3.4	2.3
2.7	(omit) FIGURE PERCENTAGES (as needed for interest rates, cost of sale items, discounts, shrinkage)	2.6	2.0
1.6	(omit) USE A CALCULATOR (as needed for individual projects, computing calories, purchasing groceries)	1.6	1.3
1.3	(omit) OPERATE AN ADDING MACHINE (as needed for grocery store trips, figuring budget)	1.3	1.3

Table 4 (Continued)

I. FIRST ROUND RESPONSE 4.0 = Considerable Use		II. ENTRY LEVEL SKILL	III. SECOND ROUND RESPONSE 4.0 = Considerable Use	IV. IMPORTANCE 3.0 = Essential
		COMPUTATIONAL SKILLS		
		IIB. A student entering Homemaking I must be able to apply computational skills in order to perform:		
3.4	(17)	LINEAR MEASUREMENTS (such as inch and yard as needed for measuring fabric and seam allowance)	3.6	2.3
2.0	(omit)	METRIC MEASUREMENTS (such as milliliter as needed for converting recipes)	2.1	1.6
3.7	(18)	LIQUID MEASUREMENTS (such as cups and pints as needed for recipes and grocery orders)	3.5	2.3
3.3	(19)	DRY MEASUREMENTS (such as pound as needed for preparing market order)	3.4	2.3
3.6	(20)	TIME MEASUREMENTS (such as minutes and fractional parts of an hour as needed for management/work efficiency studies, laboratory plans, cooking times)	3.5	2.3
		IIC. A student entering Homemaking I must apply monetary concepts in order to:		
3.2	(21)	COUNT MONEY (as needed in fund raising FHA activities/projects and paying for purchases)	3.2	2.1
2.9	(omit)	MAKE CHANGE (as needed in fund raising FHA activities/projects and checking accuracy of change received)	2.9	1.9
1.9	(omit)	COMPUTE TAX (as needed in consumer education such as identification of taxable items and figuring sales tax)	2.3	2.2
2.1	(omit)	KEEP BOOKS (as needed for individual spending records, budgets, and cost of extended learning experiences)	2.5	1.8

Table 4 (Continued)

I. FIRST ROUND RESPONSE 4.0 = Considerable Use	II. ENTRY LEVEL SKILL	III. SECOND ROUND* RESPONSE 4.0 = Considerable Use	IV. IMPORTANCE 3.0 = Essential
	COMPUTATIONAL SKILLS IID. A student entering Homemaking I must be able to read and interpret:		
2.2	(omit) GRAPHS (as needed to compare individual growth with weight/height graphs)	2.1	1.7
3.0	(omit) CHARTS (as needed for pattern envelopes and nutrient values)	2.9	2.1
3.2	(22) DIALS/GAUGES (as needed for appliance controls, 5/8" seam allowance, pressure sauce pans)	3.4	2.2
1.9	(omit) SCALES (as needed in completing floor plans and weighing food items)	1.9	1.6
1.4	(omit) MAPS (as needed in foreign cookery and location of water hardness areas in the U.S.)	1.4	1.4
	(omit) SCORESHEETS (as needed for rating food products and garments)	3.0	2.0

*Numbered items (means of 3.0 or more) were included in Round III.
(Omit) items (means of 2.9 or less) were not included in Round III.

Table 5

Summary of the Category SOCIAL MATURITY SKILLS (provided to teachers)

for Rounds I and II

I. FIRST ROUND RESPONSE 4.0 = Considerable Use	II ENTRY LEVEL SKILL	III. SECOND ROUND* RESPONSE 4.0 = Considerable Use	IV. IMPORTANCE 3.0 = Essential
	SOCIAL MATURITY SKILLS (provided to teachers) IIIA. A student entering Homemaking I must be able to:		
3.7	(23) ADAPT TO CHANGES (e.g., changes in schedules)	3.7	2.4
4.0	(24) ATTEND CLASS REGULARLY (as needed to fulfill responsibilities in laboratory)	4.0	2.6
3.9	(25) BE RESPONSIBLE FOR EQUIPMENT (e.g., sewing machines and kitchen appliances)	3.9	2.6
4.0	(26) FOLLOW THROUGH ON TASK UNTIL COMPLETED (as needed in extended learning experiences)	4.0	2.6
3.7	(27) HAVE A NEAT PERSONAL APPEARANCE (as needed in foods laboratory and style show)	3.7	2.4
3.9	(28) KNOW AND EXHIBIT APPROPRIATE BEHAVIOR (e.g., in the classroom and on field trips)	3.9	2.7
3.9	(29) SHOW CONCERN FOR SAFETY (e.g., ranges, knives, scissors)	3.9	2.6
3.9	(30) SHOW INITIATIVE TO LEARN (e.g., extended learning experiences)	3.9	2.4
3.9	(31) SHOW POSITIVE ATTITUDES TOWARD AUTHORITY FIGURE (e.g., group leader or guest speaker)	3.9	2.6
4.0	(32) TAKE PRIDE IN WORK (as needed in constructing a garment)	4.0	2.6
3.7	(33) WORK INDEPENDENTLY (as needed in clothing construction and extended learning experiences)	3.9	2.6
3.9	(34) WORK WELL IN A GROUP (as needed in foods and child development laboratory)	4.0	2.6

*Numbered items (means of 3.0 or more) were included in Round III.
(Omit) items (means of 2.9 or less) were not included in Round III.

Table 6

Summary of the Category SOCIAL MATURITY SKILLS (supplied by teachers)

for Rounds I and II

I. FIRST ROUND RESPONSE 4.0 = Considerable Use	II. ENTRY LEVEL SKILL	III. SECOND ROUND* RESPONSE 4.0 = Considerable Use	IV. IMPORTANCE 3.0 = Essential
	SOCIAL MATURITY SKILLS (supplied by teachers) IIIA. A student entering Homemaking I must be able to:		
	(35) AID ANOTHER STUDENT ON A ONE-TO-ONE BASIS	3.1	2.1
	(36) ASSUME RESPONSIBILITY	3.8	2.7
	(37) COMMUNICATE EFFECTIVELY	3.7	2.5
	(38) EXPRESS PERSONAL THOUGHTS	3.5	2.3
	(39) EXTEND SMALL COURTESIES	3.8	2.3
	(40) LISTEN TO OTHERS	3.9	2.7
	(41) LOOK AT ONESELF CRITICALLY	3.4	2.3
	(42) MAKE DECISIONS	3.6	2.5
	(43) RESPECT THE RIGHTS OF OTHERS	3.9	2.8
	(44) TRY NEW EXPERIENCES	3.8	2.5
	(45) USE TIME WISELY	4.0	2.6

*Numbered items (means of 3.0 or more) were included in Round III.
(Omit) items (means of 2.9 or less) were not included in Round III.

Table 7

Summary of the Category SPECIAL CONSIDERATIONS for Rounds I and II

N=10

I. FIRST ROUND RESPONSE 4.0 = Considerable Use	II. ENTRY LEVEL SKILL	III. SECOND ROUND* RESPONSE 4.0 = Considerable Use	IV. IMPORTANCE 3.0 = Essential
	SPECIAL CONSIDERATIONS		
	IVA. A student entering Homemaking I must be able to:		
1.8	(omit) LIFT WEIGHTY OBJECTS (e.g., sewing machine head and furniture)	1.8	1.3
3.5	(46) MANIPULATE SMALL EQUIPMENT (e.g., needle, scissors, peelers)	3.7	2.5
3.4	(47) MANEUVER AROUND OBSTACLES AND WORK IN CLOSE QUARTERS (e.g., the foods laboratory)	3.5	2.4
3.3	(48) OPERATE EQUIPMENT WITH FOOT AND/OR HAND CONTROL (e.g., sewing machine, small appliances)	3.3	2.4
	IVB. A student entering Homemaking I must be able to visually distinguish:		
3.6	(49) COLORS (as needed in clothing selection and home furnishings)	3.9	2.3
3.7	(50) SHAPES AND FORMS (e.g., line and design, body types, face shapes)	3.6	2.2
3.1	(51) DISTANCES (as needed to stitch seam allowances and arrange furniture)	3.3	2.4
	IVC. A student entering Homemaking I must be able to:		
3.9	(52) LISTEN ATTENTIVELY (as needed for classroom instructions and discussions)	4.0	2.6
3.9	(53) FOLLOW ORAL DIRECTIONS (e.g., demonstrations and assignments)	4.0	2.6

*Numbered items (means of 3.0 or more) were included in Round III.
(Omit) items (means of 2.9 or less) were <u>not</u> included in Round III.

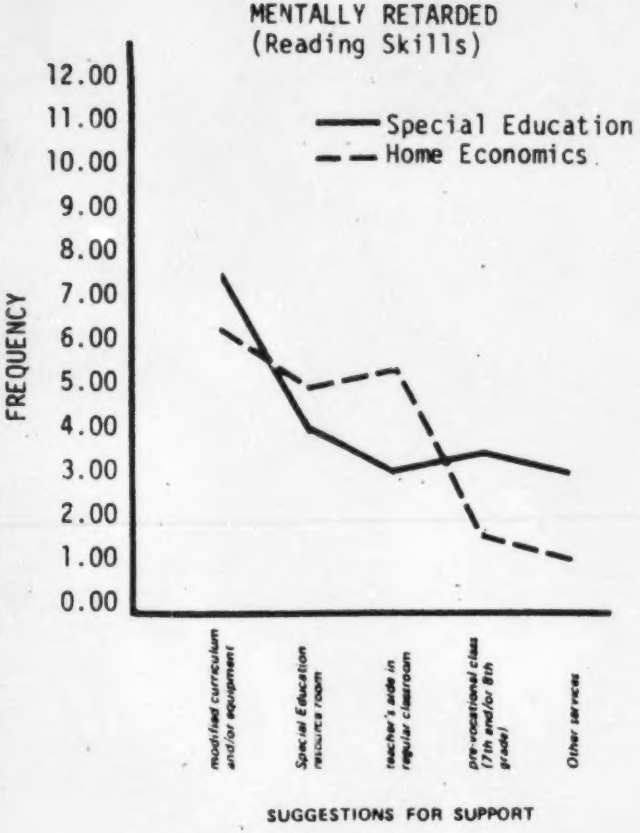

Figure 9

Suggestions for Support to Improve Reading Skills of Mentally Retarded Students

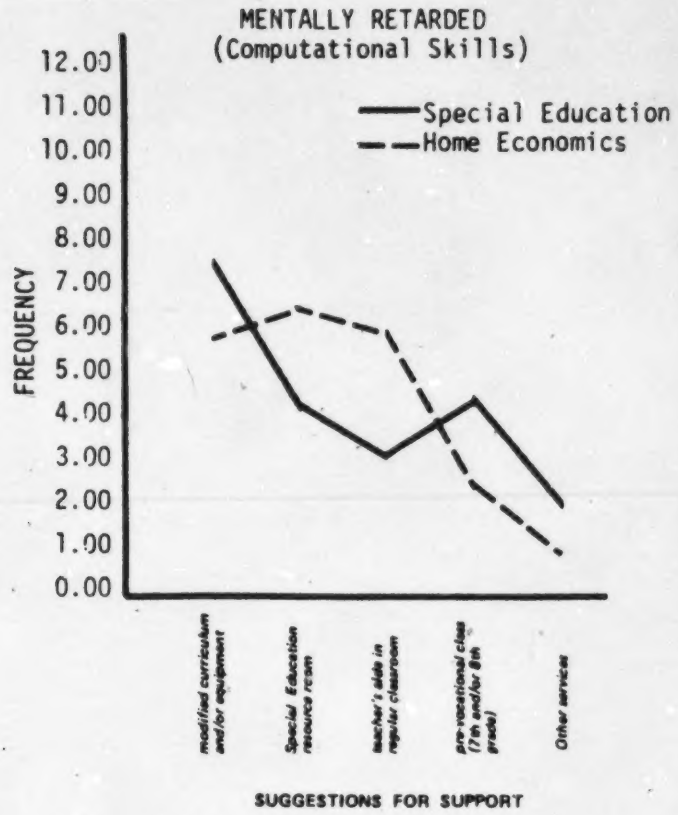

Figure 10

Suggestions for Support to Improve Computational Skills of Mentally Retarded Students

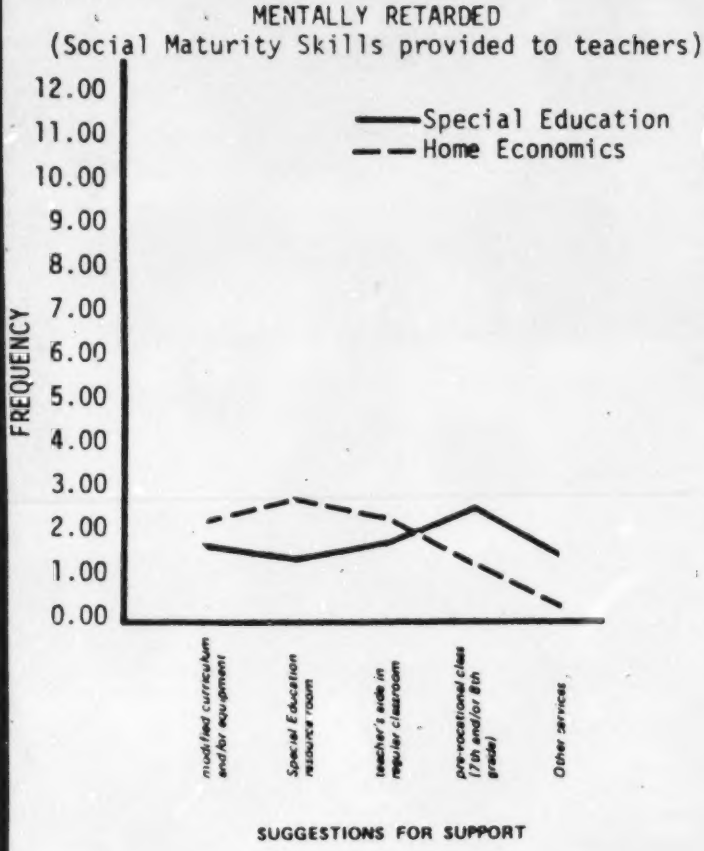

Figure 11

Suggestions for Support to Improve Social Maturity Skills (provided to teachers) of Mentally Retarded Students

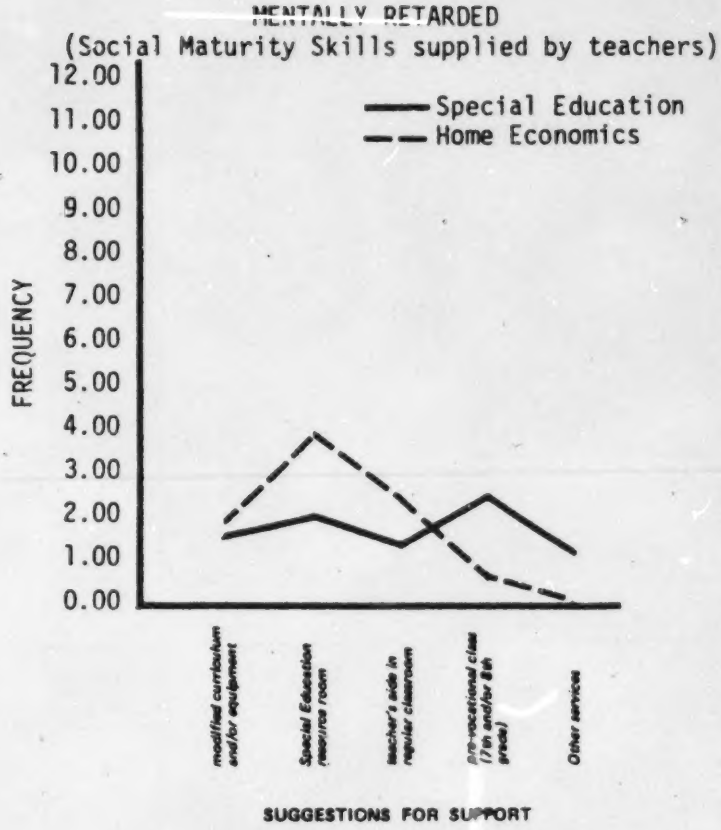

Figure 12

Suggestions for Support to Improve Social Maturity Skills (supplied by teachers) of Mentally Retarded Students

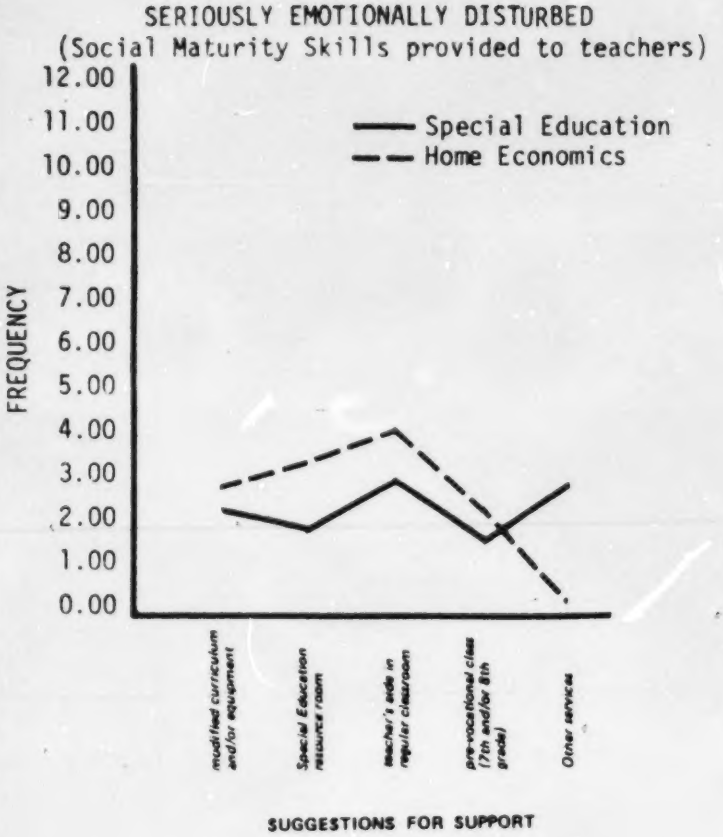

Figure 13

Suggestions for Support to Improve Social Maturity Skills (provided to teachers) of Seriously Emotionally Disturbed Students

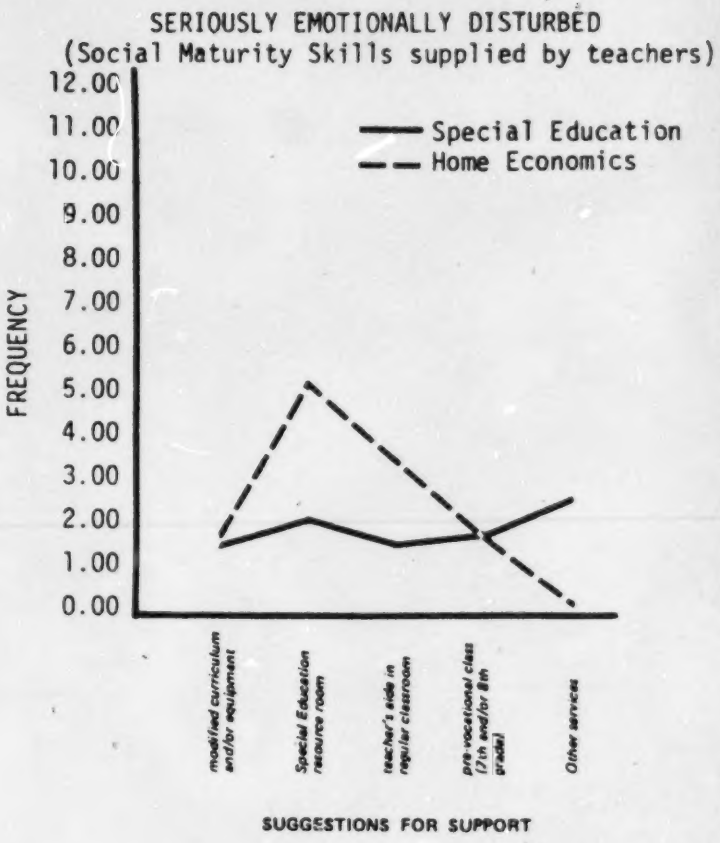

Figure 14

Suggestions for Support to Improve Social Maturity Skills (supplied by teachers) of Seriously Emotionally Disturbed Students

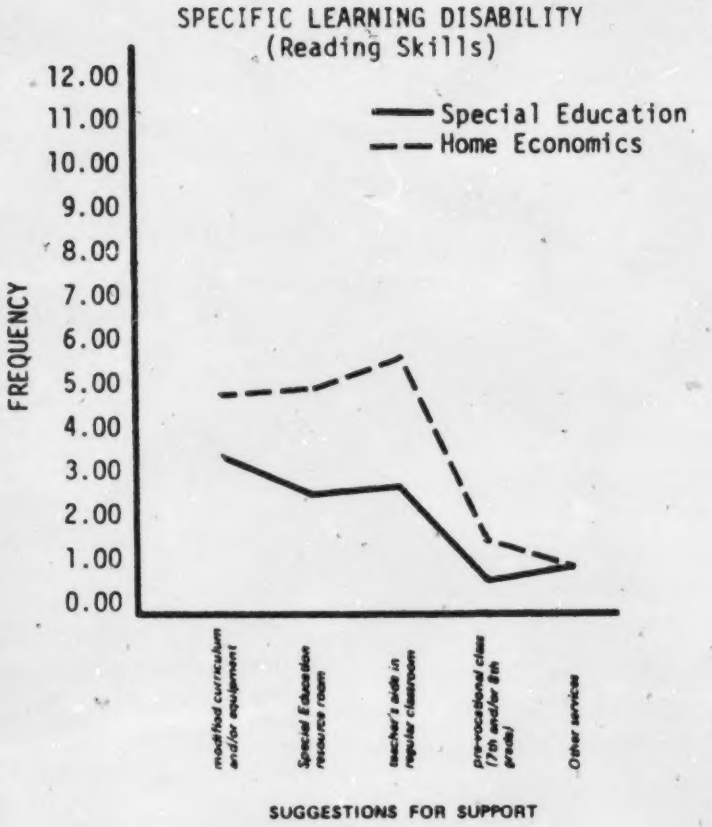

Figure 15

Suggestions for Support to Increase Reading Skills of Students with a Specific Learning Disability

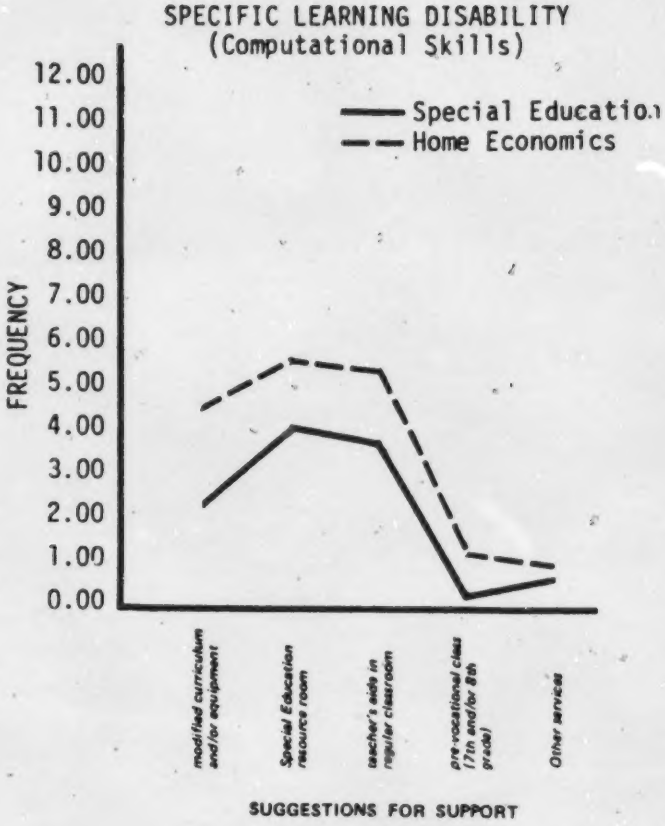

Figure 16

Suggestions for Support to Increase Computational Skills of Students with a Specific Learning Disability

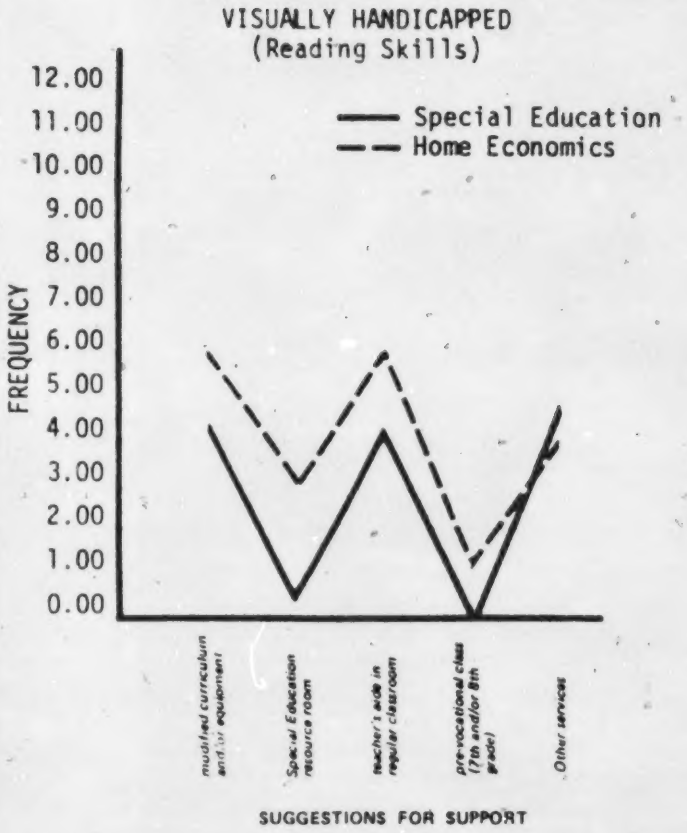

Figure 17

Suggestions for Support to Improve Reading Skills of Visually Handicapped Students

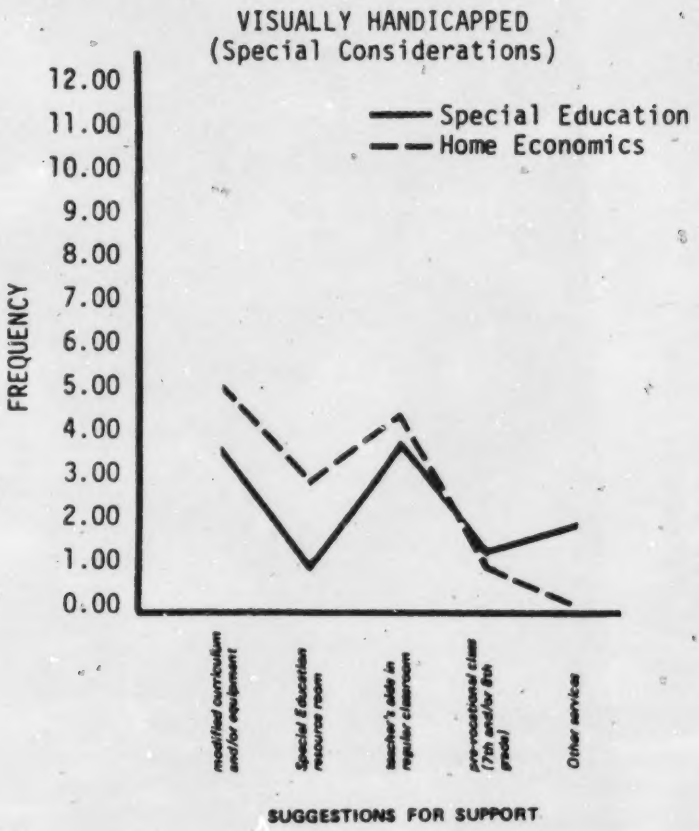

Figure 18

Suggestions for Support to Improve Psychomotor/Perceptual Skills of Visually Handicapped Students

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performance, and the use of a student partner to assist the handicapped learner in the classroom.

Summary

The suggestions for support services to acquire missing entry level skills are a modification of curriculum and/or equipment for mentally retarded and visually handicapped students to acquire reading and computational skills. An aide in the regular classroom or a Special Education resource room would probably improve the social maturity skills of a seriously emotionally disturbed student. These two suggestions were also made for improving reading and computational skills of a student with a specific learning disability. Other services which need to be considered are counseling services for the seriously emotionally disturbed student and alternative materials for the visually handicapped student such as Braille and tape recorded information.

APPENDIX F

Results: Vocational Administrator's Handbook Survey

For a discussion on the information in Appendix F see page 18.

ACCESS STRATEGIES FOR THE HANDICAPPED IN VOCATIONAL EDUCATION
SUMMARY OF THE RESULTS OF THE HANDBOOK/WORKSHOP SURVEY INSTRUMENT

Tico Foley

Item D. Five Most Important Topics.

100 Individuals responded to this item.

Five Most Important Topics on Handbook/Workshop Survey Instrument in order of decreasing frequency of responses. Texas Vocational Educators Fall 1978 sample.

Rank	Item Number	Responses	
1	# 4	(43)	Texas Education Agency Regulations and Guidelines
2	#24	(28)	Preparing Handicapped Students for Entering Regular Vocational Classrooms
2	#25	(28)	Placing Students in Vocational Education Programs
2	#28	(28)	Teaching Techniques
5	# 8	(24)	Inservice Personnel Development
6	#18	(23)	Curriculum and Curriculum Modification
6	#19	(23)	Funding
8	#32	(22)	Safety
9	#26	(20)	Assessing and Diagnosing Students Entering Programs
10	#11	(18)	VocEd/SpEd/TRC Coordination
10	# 3	(18)	Laws: State
12	# 2	(17)	Laws: Federal
13	#10	(15)	Mainstreaming
13	#40	(15)	Employment Placement
15	#31	(14)	Altering Attitudes of Non-handicapped Students
15	#22	(14)	ARD and IEP Meetings
17	#23	(13)	Preparing Individualized Educational Programs (IEP)
18	#36	(9)	Providing Learning Support and Assistance in Addition to the Regular Vocational Education Program
18	#29	(9)	Counseling and Guidance
18	# 7	(9)	Developing Programs/Writing Proposals and Applications
21	# 5	(8)	Local Educational Agency Policies, Plans and Procedures
21	#12	(8)	Handling the Concerns and Complaints of Parents, Advocates and Government Agencies
21	# 1	(8)	History and Rationale of Handicapped Persons' Rights
21	#38	(8)	Facilities and Equipment
25	#21	(7)	Involving Parents

Rank	Item Number	Responses	
25	#30	(7)	Characteristics, Abilities, and Differing Severities of the Nine Handicapping Conditions
27	#35	(6)	Preparing Handicapped Students for Parenting and Community Living
27	#20	(6)	Selecting and Evaluating Materials
27	# 9	(6)	Determining the Least Restrictive Environment
30	#13	(5)	Resource People and Groups
30	#17	(5)	Exemplary and Innovative Programs
30	#43	(5)	Evaluating Programs
33	# 6	(4)	Local Advisory and Steering Committees
33	#16	(4)	Using Paraprofessionals, Aides, and Volunteers
33	#39	(4)	Measuring and Evaluating Students in Vocational Education
36	#27	(3)	Procedural Safeguards, Due Process, Hearings, Etc.
36	#34	(3)	Managing Student Behavior
38	#15	(2)	Resource Materials
38	#33	(2)	Individualizing Instruction
38	#42	(2)	Follow-Up Services
41	#44	(1)	Definitions
41	#14	(1)	Community Resources
41	#37	(1)	Barriers
44	#41	(0)	Follow-Up Data
44	#45	(0)	Please Specify

APPENDIX G

Results: Vocational Adjustment Coordinators Handbook Survey

For a discussion of the information in Appendix G see page 19.

TEXAS A&M UNIVERSITY

VAC HANDBOOK SURVEY INSTRUMENT

Tico Foley

Summary of the results of the TAVAC 8 August 78 sample

174 Surveys were returned

DEMOGRAPHIC INFORMATION

Position or Title

freq	
167	VAC
7	Other

Number of years as VAC

%	freq		
9	16	0	
8	14	1	mean = 4.8
29	51	2 to 3	std dev = 3.8
18	32	4 to 5	median = 3.9
24	41	6 to 9	range = 20
11	20	10 or more	

Grades Served

freq	
158	8 to 12
16	other

Ages Served

freq	
78	14 to 21
82	16 to 21
14	other

Subjects Taught

freq	
29	Academics
64	Prevocational
12	Vocational
19	Any combination
50	Missing data

161

VAC Handbook Survey Summary

Vocational Certifications

%	freq	
15	26	claim some vocational endorsement

Special Education Certification

%	freq	
94	164	claim some special educational endorsement

Size of School District

%	freq	
37	64	15,000 <
10	18	10,000 < 15,000
12	21	5,000 < 10,000
20	34	2,500 < 5,000
12	21	1,000 < 2,500
5	9	< 1,000
4	7	Missing Data

Rural or Urban Setting

%	freq	
34	59	Rural
56	98	Urban
5	9	Both
5	8	Missing Data

ESC Serving School

freq		
9	1	Edinburg
5	2	Corpus Christi
3	3	Victoria
34	4	Houston
5	5	Beamont
6	6	Huntsville
15	7	Kilgore
2	8	Mt. Pleasant
5	9	Wichita Falls
18	10	Richardson
12	11	Fort Worth
11	12	Waco
6	13	Austin
2	14	Abilene
1	15	San Angelo
6	16	Amarillo
8	17	Lubbock
4	18	Midland
0	19	El Paso
13	20	San Antonio
9		Missing Data

Rural/Urban VAC's by Size of School District

ISD SIZE		Rural	Urban	Other	Row Total
15,000 <	Count	2	59		61
	Tot Pct	1.2	36.4		37.6
10,000 < 15,000	Count	1	15		16
	Tot Pct	0.6	9.3		9.9
5,000 < 10,000	Count	8	12		20
	Tot Pct	4.9	7.4		12.3
2,500 < 5,000	Count	18	8		26
	Tot Pct	11.1	4.9		16.0
1,000 < 2,500	Count	18	3		21
	Tot Pct	11.1	1.9		13.0
< 1,000	Count	9	0		9
	Tot Pct	5.6	0.0		5.6
Other	Count			9	9
	Tot Pct			5.6	5.6
Column Total	Count	56	97	9	162
	Tot Pct	34.6	59.9	5.6	100.0

Number of missing observations = 12

HIGHEST AVERAGE RATINGS OF IMPORTANT TOPICS ON VAC HANDBOOK SURVEY INSTRUMENT

Key to Means

1 = Important
2 = Don't know
3 = Not Important

Missing data was not used in calculating ranks or means

Rank	Item Number	Responses	
1	# 9	1.03	Supervising job training and placements
2	# 4	1.05	Job description of a VAC
3	#35	1.05	Assessing students' readiness for job training, placement, or graduation
4	# 1	1.06	Definition of instructional program conducted by a VAC
5	#22	1.07	Graduation plan and requirements for student graduation
6	# 2	1.07	Rationale, purpose, and goals of the VAC instructional program
7	#34	1.07	Assessing students' vocational skills and potentials
8	# 8	1.08	Field job placement responsibilities of the VAC
9	#21	1.08	Child labor laws; wage and hour laws; affirmative action; etc.
10	# 3	1.08	Federal and state laws affecting the VAC instructional program
11	#43	1.08	Liability and insurance for VAC and student; ex: workmen's compensation, transporting students, etc.
12	#26	1.09	Informing, involving, and counseling parents
13	#10	1.10	Counseling and guiding students
14	#37	1.11	Prevocational training
15	#39	1.11	Community resources providing direct services to students with special needs; ex: CETA, TEC MHMR, etc.
16	#27	1.12	ARD and IEP meetings: who, how, what, where, when, etc.

VAC Handbook Survey Summary

MOST OFTEN MENTIONED AMONG
FIVE MOST IMPORTANT TOPICS ON
VAC HANDBOOK SURVEY INSTRUMENT

Rank	Item Number	Responses	
1	# 4	(87)	Job description of a VAC
2	# 7	(77)	Classroom responsibilities of the VAC; what should be taught
3	# 3	(56)	Federal and State laws affecting the VAC instructional program
4	#10	(56)	Counseling and guiding students
5	#22	(54)	Graduation plan and requirements for student graduation
6	#27	(53)	ARD and IEP meetings: who, how, what, where, when, etc.
7	#18	(50)	How to develop potential employers
8	# 2	(46)	Rationale, purpose, and goals of the VAC instructional program
9	#34	(42)	Assessing students' vocational skills and potentials
10	# 1	(41)	Definition of instructional program conducted by a VAC
11	# 8	(39)	Field job placement responsibilities of the VAC
12	#21	(39)	Child labor laws; wage and hour laws; affirmative action; etc.
13	#15	(39)	Off-campus job placement procedures
14	#19	(34)	Public relations techniques to enlist the support of others as advocates and employers of the handicapped
15	# 9	(33)	Supervising job training and placements
16	#33	(33)	Developing the IEP documents
17	# 5	(31)	Competencies, characteristics, and certification of a VAC

OTHER IMPORTANT TOPICS LISTED ON VAC HANDBOOK SURVEY

Child Care Problems (listed four times)

Sex Education (listed four times)

V.D. Information (listed three times)

VAC Travel (listed two times)

Physical Education

Lifetime Sports

Assessment Instruments

Personal Relationships with employer

Student Grades

Grading method for students

Writing a proposal for a VEH unit

Guidelines of regular vocational education applicable to VAC

Drivers Education

Planning for classes

Resource people

Chain of command for VAC to TEA

Problems with others closely working with

Workshops presented pertaining to vocational training

AVERAGE PERCENT OF TIME
VAC'S SPEND ON DUTIES
DURING AN AVERAGE MONTH

Higher Group	△	Average Percent of Time	
*** EXP	2.2%	4.5	Parent counseling
		2.7	Placing students for evaluation
		2.3	Refering students to other agencies
		3.8	Reviewing occupational and career information
* EXP	3.5%	9.5	Public relations and salesmanship
		4.4	Attending ARD, IEP, and other meetings
+ EXP	1.1%	2.5	Scheduling students
* EXP	3.6%	8.7	Counseling students at school
*** EXP	5.2%	9.5	Counseling students on the job site or elsewhere
* URB	0.8%	2.0	Transporting students
*** EXP	3.6%	6.0	Traveling between schools and job sites
		1.6	Receiving referals on special education students
* EXP	2.5%	6.9	Required paperwork, reports, evaluations, forms, etc.
+ EXP	2.2%	6.0	Developing jobs with potential employers
		2.8	Administrative conferences, staff meetings, inservice, etc.
		7.9	Placing students on jobs
		7.6	Supervising students on jobs
		9.0	Pre-vocational classes
		1.5	Job follow-up data and services after graduation
+ EXP	0.6%	.7	Other

KEY: *** = $p < .001$
** = $p < .01$
* = $p < .05$
+ = $p < .1$
△ = difference between higher group and lower group

NOTE: Missing data was included in these calculations, so this table may be revised upon recalculation.

OTHER DUTIES LISTED ON VAC HANDBOOK SURVEY

Planning for classes (listed twice)

Classroom planning time (listed twice)

Bringing back dropouts

Informing professional personnel of VAC

P.R.

Assessing & Evaluating students

Testing

Bibliography

Resource Class

Employer Contacts on student employees

Working with pre-voc teachers

Conference with TRC counselor

Curriculum Development

Go-between for graduation

Voc. assessments

VAC Handbook Survey Summary

NEW NAME

First choices	Second choices	Total choices	
7	5	12	Special Needs Program
19	5	24	Special Needs and Career Program
8	4	12	Secondary Special Needs Program
30	26	56	Special Vocational Needs Program
13	18	31	Special Needs Work-Study Program
26	9	35	Secondary Individual Needs Program
14	1	15	VAC
41	6	47	Other
16	100	116	Missing Data

Words most often mentioned in "other" titles:

(36)	(vocational)
32	program
(28)	(adjustment)
25	vocational-adjustment
(19)	(work)
14	work-study
10	vocational
9	secondary
7	needs
5	individual
4	cooperative
4	work
3	school
3	adjustment
2	career
2	education
2	special
1	children
1	class
1	community
1	coordinator
1	development
1	exceptional
1	handicapped
1	on-the-job-training
1	services
1	student
1	training
1	work-school
1	vocational-guidance

Words most often mentioned in given titles and other titles combined:

202	program
177	needs
137	special
(92)	(vocational)
66	vocational
56	secondary
(50)	(work)
45	work-study
40	individual
(28)	(adjustment)
26	career
25	and
25	vocational-adjustment
4	work
4	cooperative
3	adjustment
3	school

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